ANNUAL REPORT

OF THE

ARCHÆOLOGICAL SURVEY OF INDIA,

EASTERN CIRCLE,

FOR

1915-16.

CALCUTTA:

THE BENGAL SECRETARIAT BOOK DEPOT.

1916.

[*Price—Indian, 7 annas; English, 8d.*]

BOMBAY BRANCH

OF THE

Royal Asiatic Society.

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No. 381.

FROM DR. D. B. SPOONER, B.A., Ph.D., F.A.S.B.,
Superintendent, Archæological Survey of India, Eastern Circle,

TO THE SECRETARY TO THE GOVERNMENT OF BENGAL,
GENERAL DEPARTMENT.

Dated Simla, the 7th August 1916.

SIR,

I HAVE the honour to forward herewith the Annual Report of the Archæological Survey, Eastern Circle, for the year 1915-16, and to say that the two sets of photographs, due to accompany this report, will be forwarded later, as soon as they can be prepared.

The delay in submitting the report, for which I must apologize, is due to my having officiated through the month of June for Sir John Marshall, Director-General of Archæology in India, who was on one month's leave, which prevented me from undertaking the work as early as is usual.

I have the honour to be,
SIR,
Your most obedient servant,

D. B. SPOONER,
Supdt., Archæological Survey of India, Eastern Circle.

ANNUAL REPORT

OF THE

ARCHÆOLOGICAL SURVEY OF INDIA,

EASTERN CIRCLE,

FOR

1915-16.

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ANNUAL REPORT

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FOR

1915-16.

SUPERINTENDENT'S REPORT.

PART I.

ANNUAL REPORT

OF THE

ARCHÆOLOGICAL SURVEY OF INDIA, EASTERN CIRCLE,

FOR

1915-16.

PART I.

GENERAL REMARKS.

1. **Office.**—The Assistant Superintendent, Mr. J. F. Blakiston, was granted privilege leave for 3 months from the 7th May 1915 combined with extraordinary leave without pay for another 3 months. On his return to India he was permitted to join the Indian Army Reserve of Officers, which he did with effect from the 2nd October 1915, so that since the 7th May 1915 the Superintendent has been entrusted with his duties in addition to his own. Subsequently, on the death at the front of Mr. Gordon Sanderson, our Superintendent for Muhammadan and British Monuments in the Northern Circle, Mr. Blakiston was gazetted Superintendent in Mr. Sanderson's place, (Mr. Page taking charge of his duties there pending his return from the Army), so that since the 27th January 1916 the post of Assistant Superintendent in the Eastern Circle has been vacant.

The Assistant Superintendent's clerk, Babu Krishna Chandra Mazumdar, was on privilege leave for 2 months, *i.e.*, from the 2nd July to the 1st September 1915, and the second clerk in the Assistant Superintendent's office, Muhammad Habib-ul-Haq, was on privilege leave for 16 days, *i.e.*, from the 29th October to the 13th November 1915. He returned to his duties on the 19th November, the intervening days having been Sunday and other gazetted holidays. The Maulvi in the Superintendent's office, A. M. J. Muhammad, was on privilege leave for 1 month, from the 24th November to the 23rd December 1915, but returned to his duties only on the 3rd January 1916, as the intervening days were holidays.

Among the temporary staff appointed in connexion with the revision of the List of Ancient Monuments in Bihar and Orissa, the photographer, Mr. Suprakash Ganguli, was on privilege leave for 52 days, that is, from the 20th September to the 10th November 1915.

On the whole, the staff have worked very satisfactorily throughout the year, with the same exception referred to in my last report. My special thanks are due to my clerk, Babu Makhan Lal Mullick; to my draftsman, Babu Hari Das Dutta; and to my photographer, Babu Pindi Lal, for the unusually able and willing service they have rendered. And I would also express at this point my cordial appreciation of the careful and efficient way in which my overseer, Mr. B. L. Ghose, has assisted me in the excavation of the Bulandi Bagh at Patna, particularly in those periods when I was myself unavoidably absent in connexion with the other excavations which this office has now instituted at Nalanda. Mr. Ghose is not a member of my regular staff, but in the four years in which he has been engaged at Pataliputra he has acquired a sound method and has developed much care and skill in

excavation work, and this season in particular has given me assistance of much value. I am indebted to Babu Hari Das Dutta and to Babu Narendra Nath Bose for similarly good and careful work at the Nalanda site; and to these and all the others who have repaid my confidence by earnest and conscientious work I tender my best thanks.

The expenditure during the year has been as follows :—

1915-16.

	Rs. A. P.	Rs. A. P.
Salary of Gazetted Officers—		
Superintendent's pay	8,541 10 8	
Assistant Superintendent's pay	2,583 13 11	
		11,125 8 7
Salary of Non-Gazetted Establishment—		
3 Clerks	1,592 0 0	
1 Photographer	1,200 0 0	
2 Draftsman	1,715 10 4	
1 Maulvi	1,470 0 0	
5 Peons	472 12 5	
1 Chowkidar	72 0 0	
Temporary Establishment	12 0 0	
Grain Compensation Allowance	43 1 1	
		6,577 7 10
Allowances—		
Travelling allowances, gazetted officers	2,999 6 0	
Ditto, Establishment	2,006 0 9	
		5,005 6 9
Supplies and Services—		
Charges for excavations	4,999 4 1	
Photographs and photo materials	770 7 0	
Purchase and repair of tents	53 3 6	
		5,822 14 7
Contingencies—		
Purchase of Stationery	3 9 0	
Purchase of books	575 5 0	
Rents, Rates and Taxes	600 0 0	
Postage and Telegram charges	330 2 6	
Conveyance of tents, stores, records, etc.	424 13 6	
Hot and cold weather charges	104 7 1	
Purchase and repair of furniture	93 0 0	
Miscellaneous	365 9 0	
Menial charges	97 11 10	2,594 9 11
Total ...	...	31,125 15 8
Temporary Establishment—		
Salary—		
2 Photographers	2,597 12 10	
3 Peons	294 4 7	
		2,892 1 5
Allowances—		
Travelling allowances...	1,142 6 3	1,142 6 3
Contingencies—		
Photo materials, etc.	1,150 8 6	1,150 8 6
Total ...	...	5,185 0 2

2. **Superintendent's Tour.**—Owing to the fact that the Assistant Superintendent has been absent for all but five weeks of the year under review, and that I have been in charge of his duties, Bankipore, where his headquarters are situated and which is also the centre of my excavations, has held me in residence the greater portion of the year. That part of our correspondence which necessitates most frequent reference to previous records is the portion dealing with our conservation work, and as the records in

question are at the headquarters of the Assistant Superintendent, it is less convenient to do the Assistant Superintendent's work from any other centre than it is to do the Superintendent's work from Bankipore. In the year 1914-15, however, the excavations at Pataliputra were continued farther into the hot weather than is usual, so that from the beginning of the financial year until nearly the middle of July the Superintendent was in camp at Patna for this purpose. On 14th August he went to Simla at the request of the Director-General of Archæology, returning to Bankipore on the 6th September, where he remained until the middle of October, paying a visit of inspection in the mean time to Maner. From the middle of October until the middle of November he was at headquarters in Calcutta on duty at the Archæological Section of the Indian Museum, as the Assistant Superintendent, Mr. R. D. Banerji, attached to the Museum, was then absent. In the course of this month, however, he was called to Sasseram on inspection duty, and shortly after his return to the Assistant Superintendent's office in November paid a preliminary visit to Bargaon in connexion with the proposed excavations at Nalanda. The first half of December was spent on tour in the Saran district in order to check the work of the special photographers engaged for the revision of the List of Ancient Monuments, and just before Christmas trial excavations were commenced at Panch Pahari, south of Patna city. These were continued through January, and considerable work was also done at the excavated site at Kumrahar in connexion with the visit to this place of His Excellency Lord Hardinge, which occurred on the 2nd February. As soon as could be arranged thereafter, the Superintendent proceeded to Bhandak in the Central Provinces, where it had been reported that private excavations were being carried out for quarrying purposes which the Archæological Department was instructed to report upon. From this centre, at the suggestion of the Director-General of Archæology and with the consent of the Government of Bengal, the Superintendent proceeded to Bombay, to confer with the Revd. Dr. James Hope Moulton on Iranian subjects connected with the work at Pataliputra, and thereafter returned to Bankipore viâ Sanchi, where he was called to consult with the Director-General on Museum matters. From that time until the end of the financial year his time was divided between the excavations at Pataliputra (Bulandi Bagh and Pahari sites), his duties at the Assistant Superintendent's office and the excavations at Nalanda, although a further visit was paid to the Indian Museum at Calcutta on the 28th February. But although thus by far the major portion of the year was spent on tour, but little of this touring was directly connected with the conservation branch of our work. This is explained by the fact that the programme for the year's conservation, which had been drawn up by the Assistant Superintendent before he went on leave, was very largely suspended throughout the circle owing to the war, and it was judged inexpedient to put forward any new proposals in the conditions then existing.

A detailed statement of this touring is given in Appendix A.

3. **Exploration.**—Mr. (now, I am glad to say, Sir) Ratan Tata's munificence to the cause of Archæological research was continued throughout the period under review. When the new season's work started we had a balance in hand from his previous donation of Rs. 6,216-1-3, and on the 17th February 1916 he sent a further generous cheque for Rs. 15,000. Of this total a sum of Rs. 9,362-4-3 has been expended during the year, but this expenditure extends beyond the financial year, indeed up to the end of the season's work, viz., the 12th of July 1916. A somewhat detailed but still brief account of this work will be given in Part II of this report, but here it will suffice to say that since one of Sir Ratan Tata's main objects in undertaking these excavations was the anticipated acquisition of sculptural or other artistic material, and since the Kumrahar site gave little promise of yielding such, our attention was this season turned to other sites in Patna, where it was hoped that better fortune in this matter would reward us. The present report therefore sheds no further light upon the Persepolitan problems raised in the previous excavations. As stated last year, the probability that the group of palaces at Kumrahar were designed in more or less detailed imitation of the Persepolitan complex had already

then grown as near a certainty as could be expected in the unfortunate conditions there obtaining, where the two palaces which might most naturally be expected to settle the question are both closed to exploration by the presence on them of Muhammadan graveyards. In these circumstances the Department felt under obligations to do its utmost to secure for Sir Ratan Tata the material he desired, and the further prosecution of the fascinating work at Kumrahar itself was accordingly postponed. It is hoped, however, that some time in the future Government will be in a position to acquire a further strip of land south of the land now in Government possession, and continue the tracing of the rampart in this direction and towards the east. But I do not consider the likelihood of this tract yielding artistic material of importance, such as to warrant a further expenditure of Sir Ratan Tata's money on it. The work was therefore carried out this season at Panch Pahari, where the five stupas of Asoka are believed to have stood, and at the Bulandi Bagh, where in the previous season we had made discoveries of some promise. The former site, I regret to say, yielded almost nothing. The latter has yielded very largely of most interesting archæological material. But nowhere have we as yet encountered precisely that sort of sculptural or artistic material which we sought.

It is though a pleasure to record that the Eastern Circle has again been favoured with a liberal donation to our research work by a non-official agency. The Council of the Royal Asiatic Society of Great Britian and Ireland determined in the year under review to put at the disposal of the Archæological Department the money collected in their Exploration Fund, and, as this was earmarked especially for work at the buried university of Nalanda in the Patna district of Bihar, the privilege of applying it has come to me. The total sum received from London was £218-10, in addition to which I drew also on the Rs. 5,000 in my budget for the year, but only to a small extent at a time when for special reasons the London money was not available. The total expended this season at Nalanda was Rs. 2,591-2-8, leaving a balance in hand of the Royal Asiatic Society's money of Rs. 1,049-14-9 for application to the site next year. But I shall hope to supplement this sum substantially out of my own budget, as the trial excavations there are of special promise for the future.

I must also add my keen appreciation of the sympathy and assistance received from the Government of Bihar and Orissa in connexion with this work. Despite the financial stringency of the present year, Sir Edward Gait's Government were so good as to allot a sum of Rs. 1,762-6-0 for the acquisition of the necessary land at and near Bargaon in addition to a further thousand rupees very generously put at my disposal for pumping water out of the excavated area at Kumrahar on the occasion of Lord Hardinge's visit. Few Governments have ever shown a more liberal attitude toward scientific research, and the Archæological Department will not be alone in gratitude to them.

A more detailed account of all these operations will be given in Part II, although for reasons of economy Part II will be somewhat curtailed this year.

4. **Conservation.**—As was to have been expected, the war has rather seriously affected conservation work throughout the Eastern Circle, but principally in the domain of new works. Very many of the items entered on the list of works proposed for the year could not be taken in hand, owing to lack of funds, and the lists submitted for next year are thus more largely repetitions of the previous ones than is usually the case. It was obviously unwise to put forth further new proposals in such circumstances, and the touring on which such further new proposals would have been based in ordiary years was rendered unnecessary for this reason. Nevertheless considerable work has been carried out in all the provinces served by this office, which is briefly reported on in the following paragraphs.

(A) **Bengal.**—The total expenditure reported for the year by the Department of Public Works in the Bengal Presidency amounts to Rs. 11,513-10-8, distributed over 61 items, some embracing several monuments. The great majority of these works, indeed 51 out of the total, were simple annual repairs of a comparatively petty nature. Only two of the lot entailed an

expenditure of more than Rs. 500, viz., repairs to the Hussaini Dalan and adjacent buildings at Dacca (where Rs. 1,824 were spent), and annual repairs to the various monuments at Gaur and Pandua (where a total of Rs. 973 was expended against an estimate for Rs. 1,088). Among works reported to have been completed in 1915-16 I may mention special repairs to the tombs of Kutub-ud-din, Sher Afghan and Bahram Sakka at Burdwan (expenditure Rs. 1,063-10-5), and to the Gunmant Mosque and certain other monuments at Gaur and Pandua. Special repairs to the Darga of Shah Ismail Ghazi at Baradarga in the Rangpur district have also been completed. On the other hand, the special repairs to the Satgumbaz Mosque near Bagerhat, to Khan Jahan Ali's tomb at Masjidkur in the Khulna district, and to the Jatar Deul Temple in the Sunderbands are still in progress, as also the repairs to the Chika Mosque at Gaur. Here, as elsewhere, various other estimates have been countersigned and returned, but for want of funds the work could not be taken in hand. I should add that no Imperial grant-in-aid was received in Bengal during the year, save a sum of Rs. 8,000 subsequently surrendered.

(B) **Assam.**—According to the statement received from the Department of Public Works in Assam, money was expended on a total of 17 items during the current year 1915-16. Practically all of these were for annual repairs of a petty nature. Annual repairs to various monuments and antiquities at Sibsagar cost to be sure Rs. 1,018, and Rs. 384 were spent under this same head on the ruins at Dimapur. But otherwise these repairs were of a simple nature. There has been a further expenditure of Rs. 8 only against the estimate for Rs. 2,300 for special repairs to the Durga Dole and Sibdole Temple on the Sibsagar tank, which were last year mentioned as completed, and Rs. 403 have been spent on further special repairs to the Sibdole Temple at Gaurisagar, against an estimate of Rs. 806. This work is still in progress. Two inscribed stones at Maibong have also been conserved at a cost of Rs. 70, but the total of all these works is only Rs. 2,196. This figure is to be compared with the Rs. 3,632 spent in 1914-15, and the Rs. 8,128-8 spent in 1913-14.

(C) **Bihar and Orissa.**—Expenditure on six special works is reported by the Public Works Department in the Province of Bihar and Orissa. The extensive improvements to the tank surrounding the tomb of Sher Shah at Sasseram have been completed at a total cost of Rs. 19,958, the major portion of the expenditure being borne by the municipality. Government allotted Rs. 3,000 from provincial revenues toward the archæological part of the scheme in December 1914, and this figure only is counted in the archæological expenditure of the Province this year. At Hassan Sur Shah's tomb the *débris* of the dismantled houses has been removed, and the land acquired by Government has been demarcated by boundary pillars, the whole work resulting in an enormous improvement to the monument. At the tomb of Bakhtiar Khan at Chainpur a sum of Rs. 1,820 has been expended against an estimate of Rs. 13,354, and on the Mundesvari temple at the same place a further expenditure of Rs. 661 this year brings the total to Rs. 2,690 against an estimate of Rs. 3,000. Rupees 780 has been spent on miscellaneous repairs to the caves at Khandagiri and Udayagiri in Orissa, against an estimate for Rs. 800, and very numerous but prevailingly petty annual repairs have been carried out throughout the Province. The total expenditure according to the statement given in Appendix B comes to Rs. 8,802-7. This is, of course, exclusive of the money spent on acquiring land for excavation at Bargaon, the site of the ancient Nalanda.

(D) **Central Provinces.**—The Public Works Department in the Central Provinces and Berar report a total expenditure on archæological works (including annual repairs) of Rs. 10,988-4 during the year 1915-16, which was defrayed from provincial revenues only. Of this total by far the largest single item was Rs. 8,233, expended on building up the east wing of the temple of Anandeswar at Lasur in the Amraoti district, and in protecting the slope of the mound on which the temple stands. The whole estimate came to Rs. 12,851, against which Rs. 4,800 was spent in 1914-15, but although the expenditure now reaches the total of the original estimate a further sum of Rs. 600 is noted as being required in the coming year. The next largest

item was one of Rs. 562, for repairs to the Mahadeva temple at Kothali in the Buldana district, which work is now completed, and the next Rs. 370 for annual repairs to the Fort wall at Chanda. The other items on the statement published in Appendix B are all of an extremely petty nature.

I should like to take this opportunity to express my obligations to the Public Works Department in the Central Provinces for the admirable notes forwarded to me on the inspection of protected monuments in their province. They will be of the greatest possible assistance to this office in planning the next tour in the Central Provinces. In addition, I have to acknowledge with special thanks a further note on the present condition of Protected Monuments in the Second Circle forwarded by the Superintending Engineer. From this it appears that 62 out of the total number of 78 protected monuments in the Second Circle were inspected during the year, and that some sort of repairs are said to be needed to 45 of these. In the majority of cases, however, these appear to be of no very serious nature. Special repairs were carried out to one of these monuments during 1915-16 and annual repairs to 32. It is added that Rs. 12,263 will be required for works already sanctioned and that, in addition to these, a further heavy piece of work is contemplated at the Temple of Gandai. For this supplementary report I am much indebted to Mr. P. C. Lall, and shall hope to visit some of the places mentioned within the next few weeks.

5. **Treasure Trove.**—*A.*—*Bengal* :—Three discoveries of treasure trove were reported to me from Bengal during the year. Of these two were finds of coins, and one was treasure not consisting of coins. I will deal with the last-named first.

Discovery of a metal image of Vishnu at Birat in the Rangpur district.

On the 27th May 1915 the Government of Bengal forwarded to me in original an image of Vishnu, which had been found imbedded in the sub-soil of an old tank in the compound of the ruined palace at Birat in the Rangpur district, and enquired whether it was of sufficient interest to be kept in the Indian Museum. I replied that it was, in my judgment, and the image was subsequently presented to the Indian Museum on the 1st September 1915, and for some reason not quite clear to me was made over to the Art Section of that institution. The division of antiquities between the Art and Archæological Sections of the Museum on a basis of material appears to me neither sound nor satisfactory, but this is not the proper place to discuss a question of that kind, and I merely put my opinion on record as unavoidable in the context. It is satisfactory at all events that the image has been preserved. I should add that Babu Abani Chandra Chatterji has written a little pamphlet on the image in question.

Discovery of 131 coins near Kaliganj in the Khulna district.

On the 26th January 1916 the Collector of Khulna sent to the Superintendent particulars of a find of 131 of coins by certain people, apparently cultivators, in a field belonging to one Golmal Ghose and situated north of the post office at Kaliganj. These coins were sent to Mr. Nevill, Collector of Etawah, in the United Provinces, who reported that they were chiefly of the Arkat and Chinapatan or Madras mints and unfortunately in bad condition for the most part, as these coins are poorly represented in all but the Madras Museum. The great majority were coins of Muhammad Shah with two of Farrukhsiyar, two of Aurangzeb (Surat and ?), and one of Alamgir II (Azamabad). Mr. Nevill recommended the acquisition of 24.

Find of 104 coins at Bara Rajapur in the Khulna district.—On the 22nd May 1915 the same Collector reported to Government another find of coins. These were 100 (later 104) in number, and were found in a brass pot hidden in the earth while digging a drain near the house of Aijaddin Meer of Bara Rajapur. Mr. Nevill reported as follows :—

The find of 100 silver coins in the Khulna district is of some importance. With the exception of one common coin of Ala-ud-din Muhammad Shah of Delhi, the whole

find consists of the early Sultans of Bengal, from Fakhr-ud-din Mubarak Shah to Shahab-ud-din Bayazid, thus covering at the outside a period of 70 years. The hoard was probably buried soon after 817 H., or 1414 A.D. There are none of the relatively common issues of either Muhammad or Mahmud, and to judge from their appearance the coins must have remained underground in most unfavourable conditions for a very long period. Many of the coins are extensively shroff-marked, a feature that has been observed repeatedly in the case of Bengal coins, and few have perfect margins. This is particularly unfortunate, as in consequence it is impossible to determine the mint or the date in the case of types hitherto unpublished. Some are in fairly good condition, but it generally happens that the date or the place of mintage is missing precisely in those instances where they are most required.

"The find includes, in addition to the coin of Ala-ud-din Khilji, one of Fakhr-ud-din Mubarak Shah, 12 of Shams-ud-din Ilias, 31 of Sikandar bin Ilias, 42 of Ghias-ud-din Azam, 10 of Siaf-ud-din Hamza and 3 of Shahab-ud-din Bayazid."

The four subsequently recovered were found to be "all of types represented in the previous find," but these were also acquired along with the rest and distributed to the museums. The long and valuable report furnished by Mr. Nevill also includes many interesting details, but lack of space prevents my reproducing it in full. Moreover, I understand that Mr. Nevill is proposing to publish a detailed account of the find in the Journal of the Asiatic Society of Bengal, which renders it less necessary still for me to give the further details here.

B. **Bihar and Orissa.**—Four cases of treasure consisting of coins were reported to Government in Bihar and Orissa during the year. On the 23rd May 1915 Mr. Cobden-Ramsay reported that he had found another gold Huna at Junagarh in the Kalahandi State in Orissa, and very kindly presented it to the Cabinet of the Indian Museum in Calcutta. Twenty-six rupees of the years 1835, 1840 and 1862 were found on the 16th November 1914 in an earthen pot buried in the ruins of a house in village Sarauti of Siwan subdivision in the Saran district, but as these were not acquired, no further account of the discovery is necessary. Another find of 144 coins of the time of Shah Alam was reported from the village Paterhi in the same subdivision and district as having been made on the 13th May 1915; but this need not be further described either. At Id, however, police-station Angara, in the Ranchi district, 17 silver coins were found and examined subsequently by Mr. R. D. Banerji of the Indian Museum, who advised their acquisition. They are described as coins of Sher Shah, Islam Shah, Muhammad Adil Shah and Daud Shah Kararani, and have all been added to the Bihar and Orissa Coin Cabinet.

Of treasure not consisting of coins, only one find was reported to me during the year. This was the discovery of a stone image (measuring 4′ × 2′ 4″ × 1′ 2″) found by the Superintending Engineer, Mr. Bremner, while levelling the compound at St. Joseph's Convent in Cuttack. Mr. Bremner very kindly sent me photographs, from which it is judged that the image represents Varuna, and is in excellent preservation. Considering the rarity of statues of this divinity, Mr. Bremner proposes to present this image to the Bankipur Museum as soon as arrangements are made for housing finds.

6. **Epigraphy.**—On the 12th July 1915 the Commissioner of the Nagpur Division forwarded me three copper-plates which had been discovered at Bhandak in the Chanda district of the Central Provinces. These were forwarded in original to the officiating Government Epigraphist, who subsequently reported on them as follows :—

"The copper-plates record a grant of the Rashtrakuta king Krishna (I) surnamed Akalavarsha-Subhatunga, the son of Kaka (I) and grandson of Govinda (I). The characters are a northern variety of the Nagri alphabet and belong to the eighth century (A.D.). The orthography is in many cases faulty. The language is Sanskrit throughout. The record is dated on the third of the dark fortnight of the month of *Ashadha*, in the *Saka* year 694, which latter roughly corresponds to A.D. 772. The object of the inscription is to record the grant of the village Lalgalapuri or Naganapuri due east from Udumvaralamatti to a Bhattaraka, who had caused a temple of Aditya to be built in the town (Pattana) of Udumvaralamatti."

It is understood that the Government Epigraphist will arrange for the publication of these plates in the *Epigraphia Indica* in due course. The originals were returned direct to the Commissioner of Nagpur.

On the 30th June 1915 Mr. Cobden-Ramsay, Political Agent in the Orissa Feudatory States, wrote to me about four sets of old copper-plates,

each set consisting of three plates attached to rings which had been found among the effects of the late Chief of the Bond State in that Agency, and subsequently forwarded me the originals. These have been photographed and also reproduced in ink-impressions in my office, and one set of impressions has been forwarded to the Government Epigraphist, whose report on them is now expected. The originals are as yet in my office.

7. **List of Ancient Monuments.**—As mentioned above in the paragraph dealing with my tour, I devoted the first two weeks of December 1915 to a tour in Saran district, with a view to checking the work of the temporary staff engaged in photographing the monuments for me and to starting the actual revision of the list for Tirhut on the basis of the new material brought in. I found, however, that to write out a separate description of each and every temple in the division involved a wholly impracticable amount of repetition. I therefore attempted to classify the large mass of photographs before me, hoping to evolve some order out of the existing chaos, but great was my surprise when I perceived how very orderly the series was which then resulted. Fergusson, as is well known, speaks of the North Indian temple as though it were a single unit, and says that the origin and development of this architectural style are alike unknown and now untraceable, or words very much to this effect. From the classification of the Tirhut photographs, however, it appeared that all the temples in the division could be arranged in a simple sequence which was illustrative, despite the modernity of most of the structures, of each and every stage in the development. I thus set to work to make up a book of Temple Types, each numbered, so that in revising the list descriptive writing will be reduced to a minimum. I purpose to preface it with an introductory essay on the various styles in order of their development, to be fully illustrated, and then, in dealing with individual monuments of this class, merely to refer to the requisite paragraph of this introduction. A beginning has already been made in the essay on this subject which I wrote last spring and read as an illustrated lecture before the Bihar and Orissa Research Society, and the study has resulted in so great a simplification of the whole subject, that it is anticipated that the actual revision will be greatly expedited. I am proposing to devote September to this work, and shall hope to have the Tirhut volume finished before the field season starts. Being in charge of three separate offices, as I have been for the greater part of the year under review, leaves me little opportunity for continuous labour of this kind. As for the special staff of photographers sanctioned for this special work, I am glad to report that they have continued to assist me satisfactorily. The classification of temple types has appreciably lightened their labours, while at the same time increasing their efficiency, but it resulted first of all in a review and readjustment of their previous notes, and this has lessened the output of new work this year. Mr. Pindi Lal moreover had the honour of being specially called for by Sir Aurel Stein to do certain delicate and important photographic work for him in Kashmir for a time, and he was consequently absent for a period altogether of 58 days on special deputation. Even so, he has prepared two sets of prints from 240 negatives taken last year in the Gaya district, and has revised his notes on nearly 500 monuments, besides accompanying me in Saran and paying a short visit to the Champaran district to make good certain shortages. The other photographer, Mr. Suprakash Ganguli, returned to headquarters in May after his tour in the Patna district, and spent the summer fairing out his notes and printing from the negatives secured. From the third week in September until the 10th November he was on privilege leave, and on his return was occupied with departmental work in the Museum for some weeks. He made a short tour in the Darbhanga district, however, to complete our series of photographs and to revise his notes in the light of the new classification. I have pleasure in recording my satisfaction with the high quality of Mr. Ganguli's work.

8. **Drawings and Photographs.**—A list of the drawings prepared and of the photographs taken during the year is given in Appendices C and D. I must call special attention to the tentative nature of the numbering of the panels in the photographs of the sculptured temple at Nalanda. All four

sides of the temple have been excavated, but the trench along the western side is as yet too deep to permit of the panels on this side being photographed. I have done what was possible to number the panels consecutively from the south side of the entrance on the east, round the building continuously, in the order of the *pradakshinā*, but the numbers may have to be revised ultimately when the series is complete.

9. **Superintendent's Programme for 1916-17.**—Inasmuch as our field season has to be extended into the hot weather in Bihar, to permit of our reaching the lower levels in our excavations, the compilation of this report is unavoidably delayed until well on into the new year. Thus the period from 1st April to the beginning of June is covered by this report itself. In June I had the honour of officiating as Director-General of Archæology in India during the short leave of Sir John Marshall, while Mr. Haranandan Panday acted in my stead as Superintendent and Assistant Superintendent and Officer-in-Charge of the Archæological Section of the Indian Museum in Calcutta. The month of July has been given to this report and the routine duties of my three offices. August I propose to devote to an inspection tour in the Central Provinces. September I hope can be given to the revision of the List of Ancient Monuments for Tirhut. October and November will afford opportunity for further touring in connexion with our conservation work, and thereafter I hope to resume the excavations at Nalanda and at the Bulandi Bagh, if not at other sites in Patna. It is of course for Sir Ratan Tata himself to say whether he wishes the Pataliputra excavations to be continued further at his expense. His wishes for artistic material have been sadly disappointed. But the scientific interest of the work at the Bulandi Bagh is such that it can certainly not be stopped in its present state, and I shall hope to go on with this in any case.

ANNUAL REPORT

OF THE

ARCHÆOLOGICAL SURVEY OF INDIA, EASTERN CIRCLE,

FOR

1915-16.

APP ENDICES.

APPENDIX A.

The following statement shows the amount of time spent on tour :—

DR. D. B. SPOONER.

1915.

April 1st to July 10th ...	... Excavations at Pataliputra.
July 11th to August 13th	... Charge of Assistant Superintendent's office and duties.
August 14th to September 6th	... To consult with the Director-General of Archæology at Simla.
September 7th to October 7th	... Charge of Assistant Superintendent's office and duties.
October 8th ...	... Inspection tour at Maner.
„ 9th to 14th ...	... Charge of Assistant Superintendent's office and duties.
„ 15th to November 4th	... Duty at headquarters.
November 5th ...	... Charge of Assistant Superintendent's office and duties.
„ 6th to 7th ...	... Inspection tour at Sasseram.
„ 8th to 11th ...	... Duty at headquarters.
„ 12th to 21st ...	... Charge of Assistant Superintendent's office and duties.
„ 22nd to 24th ...	... Inspection tour at Bargaon (Nalanda).
„ 25th to December 2nd	... Charge of Assistant Superintendent's office and duties.
December 3rd to 15th	... Inspection tour at Chapra.
„ 16th to February 9th, 1916	Charge of Assistant Superintendent's office and duties and duties at the excavations.
February 10th ...	... Duty at headquarters.
„ 11th to 13th ...	... Inspection tour at Bhandak in the Chanda district.
„ 14th to 17th ...	... To confer with Dr. Moulton in Bombay.
„ 18th to 22nd ...	... To confer with the Director-General of Archæology at Sanchi.
„ 23rd to 27th ...	... Charge of Assistant Superintendent's office and duties and duties at the excavations.
„ 28th ...	... Duty at headquarters.
„ 29th to March 24th	... Charge of Assistant Superintendent's office and duties and duties at the excavations.
March 25th to 26th ...	... Excavations at Nalanda.
„ 27th to 31st ...	... Charge of Assistant Superintendent's office and duties at the excavations.

J. F. BLAKISTON.

1915.

April 12th to 13th ...	... Inspection of ancient monuments at Sassaram, Shahabad district.

APPENDIX B.

Statement of expenditure on archæological works in Bengal during 1915-16.

District	Locality.	Particulars of work.	Amount sanctioned.	Amount spent.	Remarks.
			Rs.	Rs. A. P.	
Khulna ...	Bagerhat ...	Thorough repairs to Satgumbaz Mosque and Khan Jahan Ali's tomb.	14,218	924 0 0	In progress.
Do. ...	Masjidkur ...	Conservation of Khan Jahan Ali's tomb at Masjidkur.	3,758	619 0 0	Ditto.
Do. ...	Bagerhat ...	Annual repairs to Satgumbaz and tomb of Khan Jahan Ali at Bagerhat.	376	357 0 0	Completed.
		Carried over ...	...	1,900 0 0	

District.	Locality.	Particulars of work.	Amount sanctioned.	Amount spent.	Remarks.
			Rs.	Rs. A. P.	
		Brought forward ...	...	1,900 0 0	
Midnapore ...	Midnapore...	Repairs to Kotebazar Cemetery and Mr. Pierce's tomb at Midnapore.	17	16 0 0	Completed.
24-Parganas	Sunderbans	Special repairs to the Jotar Deul temple ...	2,851	1,007 0 0	In progress.
Burdwan ...	Near Sahibganj.	Clark's temple	20	13 8 0	Completed.
Do. ...	Kalna subdivision.	Temple at Buddipur	17	17 0 0	Ditto.
Do. ...	Kalna ...	Mosques 19 and 16	97	92 7 6	Ditto.
Do. ...	Bamunara ...	Rudreswar Siva temple	65	70 12 0	Ditto.
Do. ...	Burdwan ...	Tombs of Berham Sakka, Sher Afgan, and Kutub-ud-din.	53	48 7 6	Ditto.
Hooghly ...	Chinsura ...	Dutch Cemetery graves	57	58 2 0	Ditto.
Do. ...	Serampore...	Danish Cemetery	43	43 2 0	Ditto.
Do. ...	Chinsura ...	Seven tombs in the English and Dutch portions of the Cemetery.	16	16 0 0	Ditto
Do. ...	Tribeni ...	Tomb of Zafar Khan Ghazi	87	85 4 6	Ditto.
Do. ...	Saptagram...	Tomb and Mosque	56	55 8 0	Ditto.
Do. ...	Pandua ...	Tomb and smaller mosque	18	10 0 0	Ditto.
Do. ...	Do. ...	Minor and large mosque	46	46 8 0	Ditto.
Bankura ...	Vishnupur...	19 Temples	345	273 3 9	Ditto.
Do. ...	Near Vishnupur.	Sareshwar temple	61	56 0 0	Ditto.
Birbhum ...	Near Suri ...	Rashmancha at Sanatore	22	22 0 0	Ditto.
Murshidabad	Faridtala ...	Tomb of Mir Madan	9	10 0 0	Ditto.
Ditto ...	Dadpur-Katra	Tomb of Azimunessa Begum	15	14 0 0	Ditto.
Ditto ...	Nazimbag ...	Tomb of Nawab Sarfaraz Khan	9	9 0 0	Ditto.
Ditto ...	Khosbag ...	Mausoleum of Ali Vardi Khan	9	9 0 0	Ditto.
Ditto ...	Roshenbag...	Ditto of Shujaud-din			
Ditto ...	Murshidabad	Tablet of Mir Zaffar	2	2 0 0	Ditto.
Ditto ...	Kunjaghatta	Tablet of Maharaja Nanda Kumar ...	2	2 0 0	Ditto.
Ditto ...	Katra ...	Tomb and Mosque of Murshid Kuli Khan ...	110	114 0 0	Ditto.
Ditto ...	Jangipur ...	Kharol mosque	127	123 0 0	Ditto.
Ditto ...	Cassimbazar	Tombs of Mary Hastings and her daughter ...	5	5 0 0	Ditto.
Ditto ...	Kalikapur...	Ditto of Danial Vander Manjette ...	5	5 0 0	Ditto.
Ditto ...	Ditto ...	Ditto of Mathews Arnold Brake ...	4	3 0 0	Ditto.
Ditto ...	Ditto ...	Tomb of John P. Van's Brake	4	3 0 0	Ditto.
Ditto ...	Ditto ...	Do. of F. Canter Vassiker	5	4 0 0	Ditto.
Ditto ...	Ditto ...	Do. of Gregorines Herklot	3	3 0 0	Ditto.
Ditto ...	Ditto ...	Tomb of John V. Van Arston	4	3 0 0	Ditto.
Ditto ...	Berhampur	Monument of Henry Sherwood	5	5 0 0	Ditto.
		Carried over ...	...	4,136 15 3	

District.	Locality.	Particulars of work.	Amount sanctioned.	Amount spent.	Remarks.
			Rs.	Rs. A. P.	
		Brought forward ...	...	4,136 15 3	
Murshidabad	Berhampur	Monument of Henry Creghton	5	5 0 0	Campleted.
Ditto	Panchanan-tala.	Tomb of Burmese prince and princess who died as State prisoners at Berhampur.	170	169 0 0	Ditto.
Nadia ...	Plassey ...	New Plassey monument	42	42 0 0	Ditto.
Do. ...	Do. ...	Pillars demarcating battlefield	118	109 0 0	Ditto.
Do. ...	Chakdah ...	Periodical repairs and preservation of temple at Chakdah.	86	89 0 0	Ditto.
Burdwan ...	Burdwan ...	Restoration of the tombs of Kutub-ud-din, Sher Afgan, and Berham Sakka.	1,081	1,063 10 5	Ditto.
Malda ...	Gaur ...	Special repairs to the Chika Mosque ...	4,270	1,894 0 0	In progress.
Do. ...	Do. ...	Ditto to the Gunamont Mosque ...	3,180	129 0 0	Completed.
Do. ...	Do. ...	Ditto to the Archæological buildings at Gaur and Pandua.	3,680	10 0 0	Ditto.
Rangpur ...	Baradarga ...	Repairs to the Darga of Shah Ismail Gazi ...	340	347 0 0	Ditto.
Malda ...	Gaur and Pandua	Annual repairs to the Archæological buildings at Gaur and Pandua.	1,088	973 0 0	Ditto.
Rajshahi ...	Bagha ...	Annual repairs to the mosque	141	135 0 0	Ditto.
Do. ...	Kusambha	Ditto ditto	150	138 0 0	Ditto.
Darjeeling ...	Darjeeling Cemetery.	Quadrennial repairs to the tomb of General Lloyd.	9	7 0 0	Ditto.
Ditto ...	Ditto	Annual repairs to tomb of Cosmode Corus ...	5	5 0 0	Ditto.
Calcutta ...	Calcutta ...	Ordinary repairs to tomb and monument in the South Park Street Cemetery.	143	139 0 0	Ditto.
Ditto ...	Ditto ...	Ordinary repairs to tombs and monuments in the North Park Street Cemetery.	37	36 0 0	Ditto.
Bakarganj ...	Barisal ...	Repairs to the mosque at Majidbari ...	3,000	...	Ditto.
Dacca ...	Dacca ...	Ordinary repairs to tombs of Jessop Pagot and Colombo Shahib in the Dacca Cemetery.	25	24 8 0	Ditto.
Do. ...	Lalbagh ...	Ordinary repairs to the old fort	120	116 0 0	Ditto.
Do. ...	Do. ...	Ditto to the Bibi Peris tomb ...	33	32 9 0	Ditto.
Do. ...	Munshiganj	Ditto to remains of an old fort ...	39	34 8 0	Ditto.
Do. ...	Dacca ...	Reapirs to Hosani Dalan and its attached buildings.	1,861	1,824 0 0	Ditto.
Mymensingh	Agarsindur	Ordinary repairs to the Sadi mosque ...	22	21 8 0	Ditto.
Ditto ...	Astagram ...	Ditto to the Kutub mosque ...	26	25 0 0	Ditto.
		Total ...	...	11,513 10 8	

Statement of expenditure on Archæological works in Assam during 1915-16.

Goalpara ...	Dhubri ...	1. Washing with soap and painting the monument over the grave of Mr. G. R. Geale. 2. Slate painting to railing posts of the monument over the grave of Mr. R. B. Dunn. 3. Repairs to cement plaster of the monument over the grave of Mr. E. W. George.	10	10 0 0	Completed.
		Carried over ...	...	10 0 0	

District.	Locality.	Particulars of work.	Amount sanctioned.	Amount spent.	Remarks.
			Rs.	Rs. A. P.	
		Brought forward ...	...	10 0 0	
Goalpara ...	Jogighopa...	Annual repairs to ancient tombs ...	25	25 0 0	Completed.
Ditto ...	Goalpara ...	Ditto the tomb of Lt. Crosswell and three others.	20	20 0 0	Ditto.
Ditto ...	Ditto ...	Special repairs to the tomb of Lt. Crosswell and three others.	10	10 0 0	Ditto.
Kamrup ...	Kamakshya	Annual repairs to the Duar Garya rock inscription at the foot of the Kamakshya Hills.	15	15 0 0	Ditto.
Darrang ...	Tezpur ...	Annual repairs to the ruins of temple on the Bamoni Hills.	80	79 0 0	Ditto.
Ditto ...	Bishnath ...	Annual repairs to certain monumental tombs	25	25 0 0	Ditto.
Sibsagar ...	Sibsagar ...	Annual repairs to monuments and antiquities	985	1,018 0 0	Ditto.
Ditto ...	Ditto ...	Special repairs to Durgadole and Sibdole temples on the bank of Sibsagar tank.	2,300	8 0 0	Ditto.
Ditto ...	Gaurisagar	Special repairs to Sibdole temple ...	806	403 0 0	In progress.
Naga Hills ...	Sachima ...	Annual repairs to memorial to Mr. Damount, Major Cock and Lt. Forbes	76	74 0 0	Completed.
Ditto ...	Dimapur ...	Annual repairs to the ruins at Dimapur ...	400	384 0 0	Ditto.
Cachar ...	Maibong ...	Preserving the two inscribed stones ...	70	70 0 0	Ditto.
Khasi and Jaintia Hills	Shillong ...	Annual repairs to Manipur Memorial ...	10	10 0 0	Ditto.
Ditto ...	Cherrapoonjee.	Ditto Scott's monument ...	10	10 0 0	Ditto.
Ditto ...	Nangkhlow	Ditto monuments to the memory of Lieut. Beadingfield and Burlton.	15	15 0 0	Ditto.
Ditto ...	Ditto ...	Repairs to ancient monuments and other buildings of historical interest.	37	20 0 0	In progress.
		Total ...	...	2,196 0 0	

Statement of expenditure on Archæological works in Bihar and Orissa during 1915-16.

Cuttack ...	Cuttack ...	Certain repairs to Udayagiri and Khandagiri	800	780 0 0	Completed.
Do. ...	Do. ...	Repairs to the gateway of Barabati Fort ...	50	23 0 0	Ditto.
Do. ...	Jajpur ...	Repairs to Ancient Monuments ...	63	59 0 0	Ditto.
Do. ...	Sonepur ...	Annual repairs to Miss Amelie's grave ...	5	10 0 0	Ditto.
Puri ...	Kanarak ...	Constructing Sculpture shed	10,000	56 0 0	Ditto.
Shahabad ...	Rohtasgarh	Annual repairs to Rohtas Fortress ...	413	411 0 0	Ditto.
Do. ...	Sassaram ...	Tomb of Alawal Khan	14	13 0 0	Ditto.
Do. ...	Do. ...	Tomb of Hassan Sur Shah	115	114 0 0	Ditto.
Do. ...	Do. ...	Tomb of Sher Shah	58	55 0 0	Ditto.
Do. ...	Do. ...	Improvement to Sher Shah's Tank ...	19,963	3,000 0 0	Ditto.
		Carried over ...	...	4,521 0 0	

District.	Locality.	Particulars of work.	Amount sanctioned.	Amount spent.	Remarks.
			Rs.	Rs. A. P.	
		Brought forward ...	...	4,521 0 0	
Shahabad ...	Sassaram ...	Tomb of Salim Shah	26	23 0 0	Completed.
Do. ...	Do. ...	Special repairs to Hussain Sur Shah's tomb ...	995	529 0 0	Ditto.
Do. ...	Chainpur ...	Ditto to Mundeswari temple ...	3,000	661 0 0	Ditto.
Do. ...	Do. ...	Ditto to Bukhtyar Khan's tomb ...	13,354	1,820 0 0	In progress.
Do. ...	Do. ...	Ordinary repair to Bukhtyar Khan's tomb. ...	50	48 4 0	Completed.
Do. ...	Bhabhua ...	Ditto to Shergarh Fortress ...	80	80 3 0	Ditto.
Do. ...	Chainpur ...	Ditto to Mundeswari temple ...	20	15 0 0	Ditto.
Do. ...	Buxar ...	Ditto to Cemetery	50	49 12 0	Ditto.
Do. ...	Do. ...	Ditto to Stud cemetry ...	50	49 14 0	Ditto.
Do. ...	Do. ...	Ditto to Buxar tomb	10	10 0 0	Ditto.
Do. ...	Do. ...	Ditto to Kalkauli tomb ...	5	5 0 0	Ditto.
Do. ...	Do. ...	Ditto to Fort Bastion ...	150	150 3 0	Ditto.
Patna ...	Maner ...	Ditto to tomb of Makndum Shah ...	400	342 0 0	Ditto.
Gaya ...	Shamsher-nagar.	Ditto to tomb of Shamsher Khan ...	50	40 0 0	Ditto.
Do. ...	Bodhgaya ...	Ditto to Bodhgaya Temple ...	73	70 0 0	Ditto.
Do. ...	Ghenjan ...	Ditto to ancient Budhist Statue ...	20	16 0 0	Ditto.
Do. ...	Gunari ...	Ditto ditto ditto ...	22	22 0 0	Ditto.
Champaran	Lauriya ...	Annual repairs to Asoka Pillar	18	20 0 0	Ditto.
Ditto ...	Gobindganj	Ditto ditto	25	17 0 0	Ditto.
Ditto ...	Rampurwa	Ditto ditto	15	11 0 0	Ditto.
Bhagalpur ...	Madhipur ...	Annual repairs to tomb of Charles Hays ...	3	3 0 0	Ditto.
Ditto ...	Buff's cemetary.	Ditto to officers and soldiers to Her Majesty's 3rd Regiment "The Buffs."	10	10 0 0	Ditto.
Purnea ...	Arraria ...	Ditto to tomb of John Macquire ...	5	5 0 0	Ditto.
Monghyr ...	Monghyr ...	Ditto to tomb of Pirsha Naffa ...	50	48 0 0	Ditto
Ditto ...	Pipahar ...	Ditto to tomb of Miss Mary Anne Backett.	8	7 0 0	Ditto.
Patna ...	Bihar ...	Providing a spiked railing round the Gupta pillar in the Subdivisional Officer's court compound.	161	21 10 0	Ditto.
Do. ...	Bankipore	Annual repairs to Major Knox's tomb ...	10	9 14 0	Ditto.
Do. ...	Rajgir ...	Ditto Mahadeo Temple ...	46	42 4 0	Ditto.
Do. ...	Do. ...	Ditto Maniyar Math ...	37	35 10 0	Ditto.
Do. ...	Patna ...	Ditto tall stone shaft ...	16	9 5 0	Ditto.
Do. ...	Cemetery, Bihar.	Ditto Syed Ibrahim's tomb ...	70	69 12 0	Ditto.
Do. ...	Rajgir ...	Ditto Jain temple ...	23	22 12 0	Ditto.
Do. ...	Gulzarbagh	Ditto Agam Khan ...	14	14 0 0	Ditto.
Hazaribagh	Chatra ...	Monument made of stone masonry for some soldiers of Her Majesty's 35th Regiment who fell in combat with the mutineers.	5	4 0 0	Ditto.
		Total ...	...	8,802 7 0	

Statement of expenditure on Archæological works in the Central Provinces during 1915-16.

District	Locality.	Particulars of work.	Amount sanctioned.	Amount spent.	Remarks.
		First Circle.	Rs.	Rs. A. P.	
Amraoti ...	Lasur ...	Temple of Anandeswar. Building up the east wing which was in dilapidated condition and protecting the slope of the mound on which the temple stands.	12,851	8,233 0 0	
Chanda ...	Markanda ...	Gateway of the temple at Markunda Providing double-headed rail support to a broken lintel in the gateway.	27	28 0 0	Completed.
Buldana ...	Kothali ...	Chintamani temple outside the village of Kothali. Wire-fencing round the temple.	431	95 0 0	Ditto.
Do. ...	Do. ...	Mahadev's temple at Kothali. Certain improvements to the temple.	720	562 0 0	Ditto.
Do. ...	Deolgaon, Raja.	Moti Samadh at Deolgaon Raja. Certain improvements to the Samadhi.	34	34 0 0	Ditto.
Balaghat ...	Lanji ...	Fort at Lanji	...	18 0 0	Requisitions completed.
Ditto ...	Garhi ...	Fort at Garhi	...	26 0 0	
Ditto ...	Baihar ...	Temples at Baihar	...	20 0 0	
Amraoti ...	Chikalda ...	Gwaligarh Forts (the whole area contained by them).	...	124 0 0	
Chanda ...	Chanda ...	Gond Raja's tomb with enclosure ...	...	105 0 0	
Do. ...	Do. ...	Monuments of the officers who fell in the seige of the Chanda City.	...	34 0 0	
Do. ...	Do. ...	Fort walls at Chanda	...	370 0 0	
Do. ...	Do. ...	Monoliths at Lalpeth	...	30 0 0	
Do. ...	Do. ...	Mahadev's temple near the Municipal office ...	...	8 0 0	
Do. ...	Markanda ...	Markanda's temple	...	8 0 0	
Do. ...	Ditto ...	Mahadev's temple attached to the above ...	...	15 0 0	
Do. ...	Bhandak ...	Temple at Taka Talao	...	8 0 0	
Do. ...	Do. ...	Bija Sen Caves	...	8 0 0	
Do. ...	Do. ...	Temple of Chandika Devi	...	15 0 0	
Do. ...	Bhatala ...	Mahadev's temple at Bhatala	...	35 0 0	
Do. ...	Neri ...	Mahadev's temple at Neri	...	10 0 0	
Akola ...	Balapur ...	Balapur Fort	...	95 0 0	
Do. ...	Do. ...	Chhatri near the dâk bungalow	...	41 4 0	
Do. ...	Barsi Takli	Bhawani temple at Barsi Takli	...	43 0 0	
Do. ...	Patur ...	Two caves at Patur	...	23 0 0	
Buldana ...	Fatekherda	Mosque at Fatekherda	...	4 0 0	
Do. ...	Mehkar ...	Old Dharamsala at Mehkar	...	3 0 0	
Do. ...	Lonar ...	Temple of Daitya Sudan at Lonar ...	...	14 0 0	
		Carried over ...	...	10,009 4 0	

District.	Locality.	Particulars of work.	Amount sanctioned.	Amount spent.	Remarks.
			Rs.	Rs. A. P.	
		Second Circle.			
		Brought forward ...	...	10,009 4 0	
Hoshangabad	Pachmarhi	Caves	...	31 0 0	
Narsinghpur	Chougaon	Temple in the Fort	...	30 0 0	
Nimar ...	Burhanpur	Tomb of Shah Nawaz Khan	...	45 0 0	
Do. ...	Ditto ...	Tomb of Adil Shah	...	45 0 0	
Do. ...	Asirgarh ...	Tomb of Shah Numa	...	45 0 0	
Do. ...	Burhanpur	Churiwalonki Masjid outside the Itwara gate of the Burhanpur City.	...	10 0 0	
Do. ...	Ditto ...	Raja's Chattri near Bordhaghat	...	25 0 0	
Do. ...	Ditto ...	Tomb of Shah Shuja and compound ...	...	37 0 0	
Do. ...	Ditto ...	Tomb of Nadirshah and compound ...	...	25 0 0	
Do. ...	Ditto ...	Bibi Sahib's Masjid with compound ...	...	116 0 0	
Do. ...	Nimbola ...	Tomb of Colonel Frazer with wall around it ...	...	9 0 0	
Do. ...	Asirgarh ...	The whole Fort, including all walls ...	...	45 0 0	
Do. ...	Ditto ...	Mosque with side rooms in the fort ...	...	60 0 0	
Do. ...	Ditto ...	Temple in the fort	...	20 0 0	
Do. ...	Ditto ...	Mahadeo's temple near Inspection bungalow with its compound wall.	...	40 0 0	
Do. ...	Ditto ...	Tomb of Shah Gohar with compound wall ...	...	50 0 0	
Do. ...	Ditto ...	Idgah with front wall and open platform ...	...	27 0 0	
Mandla ...	Kukkaramath	Ranmukteshwar temple dedicated to Shankar situated on the *abadi* of the village.	...	12 0 0	
Jubbulpore	Garha ..	Panchmatha (Group of seven temples called Panchmatha).	...	2 0 0	
Ditto ...	Burgaon ...	Temple of Somnath	...	50 0 0	
Ditto ...	Panagar ...	Large effigy of Vishnu Varaha said to belong to the period of Aurangzeb.	...	24 0 0	
Betul ...	Bhainsdehi	Temple with ornamental stones collected, known as the Mahadeo temple, consisting of stone walls with ornamental carving surmounted by a conical masonry dome plastered with lime mortar of recent date.	...	19 0 0	
Raipur ...	Sirpur ...	Temple of Lakshmana and old sites, including the sculptures close to this temple.	...	2 0 0	
Do. ...	Arang ...	An old ruined Jain temple	...	10 0 0	
laspur ...	Pali ...	Mahadeo temple	...	34 0 0	
Do. ...	Janjgir ...	The large Vaishnava temple	...	29 0 0	
Do. ...	Kharod ...	The old ruined brick temple	...	40 0 0	
Do. ...	Arbhar ...	Arbhar temple	...	19 0 0	
Do. ...	Sheorinarayan.	Old temple	...	10 0 0	
Drug ...	Deobalode ...	Shiva's temple in sandstone	...	30 0 0	
Do. ...	Gandai ...	Old temple near Gandai	...	10 0 0	
Do. ...	Dhamda ...	Temple of Sheo on Budha tank. ...	...	1 0 0	
Raipur ...	Arang ...	An old ruined Jain temple. Requisition No. 9, dated 29th May 1914, carrying out certain improvements to the Jain temple at Arang.	31	27 0 0	Work completed.
		Total ...	...	10,988 4 0	

APPENDIX C.

List of drawings finished during the year 1915-16.

123. Survey plan of the terrace at Kumrahar.
124. Plan of the excavation at Site No. 5.
125. Plan of the excavation at Site No. 6.
126. Elevation of wall No. 4 at Site No. 6 showing the limits of the blue clay underneath (in colours).

List of drawings plotted during the year 1915-16.

127. Plan of the Excavation at Pahari.
128. General plan of the Excavation at Nalanda (Monastery).
129. Plan of the Excavation (Monastery) at Nalanda.
130. Plan of the Excavation (Temple) at Nalanda.

APPENDIX D.

List of Photographs taken during the year 1915-16.

Bengal, Bihar and Orissa.

[The negatives are all full plates.]

Serial No.	District.	Locality.	Subject.
1242-3	Malda ...	Ferozpur ...	Panoramic view of the Jami Mosque of Niamatullawali. left and right halves, respectively.
1244	Do. ...	Ditto ...	Back view of same.
1245	Do. ...	Ditto ...	Interior of same.
1246	Do. ...	Ditto ...	Tomb of Niamatullawali, front view.
1247	Do. ...	Ditto ...	Ditto from south-east.
1248	Do. ...	Ditto ...	Tombs in compound of Niamatullawalli's tomb.
1249	Patna ...	Jethuli ...	Tomb of Shahabuddin Jagjati, Kacchi Dargah.
1250	Do. ...	Do. ...	General view of Shahabuddin Jagjati's tomb.
1251	Do. ...	-Do. ...	Ditto, another view.
1252	Do. ...	Do. ...	Tomb of Makdum Adam Safi, Pakka Darga.
1253	Do. ...	Do. ...	Do. general view.
1254	Gaya ...	Kako ...	Bibi Kamal's tomb.
1255	Do. ...	Do. ...	Back view of old gate, with entrance to Bibi Kamal's tomb.
1256	Do. ...	Do. ...	Old gateway and prayer platform.
1256A	Do. ...	Do. ...	Old gate, another view.
1257	Shahabad ...	Sassaram ...	Ruined tomb near police-station on site of Old Fort.
1258	Ditto ...	Ditto ...	Ditto another view.
1259	Ditto ...	Ditto ...	Ancient cloisters in the ruined Fort (right hand portion from south).
1260	Ditto ...	Ditto ..	Ancient cloister left side, from south.
1261	Ditto ...	Ditto ...	Ditto from the north.
1262	Ditto ...	Ditto ...	Portion of the Old Fort.
1263	Ditto ...	Ditto ...	Ditto interior, showing mural decoration.

Serial No.	District.	Locality.	Subject.
1264	Shahabad ...	Sassaram	View showing one side of old well at Sassaram.
1265	Ditto ...	Ditto ...	Do. another view.
1266	Ditto ...	Ditto ...	General view of Salim Shah's tomb.
1267	Ditto ...	Ditto ...	Arcade of Salim Shah's tomb.
1268	Ditto ...	Ditto ...	View from Salim Shah's tomb, looking through an archway across the tank.
1269	Patna ...	Buland Bagh excavations.	Wooden structure. View of interior, from east.
1270	Do. ...	Ditto ...	Upper portion of south side of wooden structure, from south-west ; showing decayed planking along the side
1271	Do. ...	Ditto ...	Ditto, another view.
1272	Do. ...	Ditto ...	Logs buried in blue clay.
1273	Do. ...	Ditto ...	Timbers of the wooden flooring extending eastward from the wooden structure (looking west).
1274	Do. ...	Ditto ...	Ditto, another view.
1275	Do. ...	Ditto ...	Ditto, from north-west.
1276	Do. ...	Ditto ...	Ditto, showing wooden structure in fore-ground.
1277	Do. ...	Ditto ...	Ancient chariot-wheel.
1278	Do. ...	Ditto ...	Elaborate statuette with apron : 1 cylindrical ear-ring.
1279	Do. ...	Ditto ...	Statuette, standing female (left half head-dress missing).
1280	Do. ...	Ditto ...	Terra cotta figurine.
1281	Do. ...	Ditto ...	Four-legged doll, 1 leg missing.
1282	Do. ...	Ditto ...	Torso of terra cotta figurine.
1283	Do. ...	Ditto ...	Terra cotta head with square head-dress and wheel ear-ring.
1284	Do. ...	Ditto ...	Head and shoulders of statuette, female.
1285	Do. ...	Ditto ...	Head of smiling infant, terracotta.
1286	Do. ...	Ditto ...	Broken statuette.
1287	Do. ...	Ditto ...	Ancient jar.
1287A	Do. ...	Ditto ...	Clay horse.
1288	Do. ...	Ditto ...	Pottery dish.
1289	Do. ...	Ditto ...	Broken figurine.
1290—1	Do. ...	Bara Pahari excavations.	Panoramic view of site from east (left and right halves respectively).
1292	Do. ...	Ditto ...	Trial trench from south-west.
1293	Do. ...	Ditto ...	Ditto south-east.
1294	Do. ...	Ditto ...	South arm of trench, looking east.
1295	Do. ...	Ditto ...	Ditto looking west.
1296	Do. ...	Ditto ...	Ditto showing radiating walls and hub in centre of ruined stupa.
1297	Do. ...	Ditto ...	Ditto showing hub.
1298	Do. ...	Ditto ...	Ditto ditto.

Serial No.	District.	Locality.	Subject
1299	Patna ...	Bara Pahari excavations	South arm of trench showing hub.
1300	Do. ...	Ditto ...	Trial trench hub in process of being opened.
1301	Do. ...	Nalanda excavation.	Panelled temple after excavation, panels numbered 1—4, running south from main entrance on the east of the temple. (*N.B.*—The numbers of these panels run from right to left in all these photographs. The series is incomplete, since the west side of the building could not be photographed, and the numbers are thus open to revision later.)
1302	Do. ...	Ditto ...	Panels 5-8 (from right to left).
1303	Do. ...	Ditto ...	Do. 9-12.
1304	Do. ...	Ditto ...	Do. 13-16.
1305	Do. ...	Ditto ...	Do. 17-20.
1306	Do. ...	Ditto ...	Do. 21-23, being east end of frieze on south side.
1307	Do. ...	Ditto ...	Do. 24-27.
1308	Do. ...	Ditto ...	Do. 28-31.
1309	Do. ...	Ditto ...	Do. 32-35.
1310	Do. ...	Ditto ...	Do. 36-38.
1311	Do. ...	Ditto ...	Do. 39-41.
1312	Do. ...	Ditto ...	Do. 42-45.
1313	Do. ...	Ditto ...	Do. 46-49.
1314	Do. ...	Ditto ...	Do. 49-52.
1315	Do. ...	Ditto ...	Do. 53-55.
1316	Do. ...	Ditto ...	Do. 58-60.
1317	Do ...	Ditto ...	Do. 61-64.
1318	Do. ...	Ditto ...	Do. 65-68.
1319	Do ...	Ditto ...	Do. 69-71.
1320	Do. ...	Ditto ...	Do. 72-75.
1321	Do. ...	Ditto ...	Do. 76-77, forming west end of frieze on south side of temple.
1322	Do. ...	Ditto ...	Panels 135-138, being west end of frieze on north side of the temple.
1323	Do. ...	Ditto ...	Panels 139-142.
1324	Do. ...	Ditto ...	Do. 143-146.
1325	Do. ...	Ditto ...	Do. 147-150.
1326	Do. ...	Ditto ...	Do. 150-153, now displaced.
1327	Do. ...	Ditto ...	Do. 154-157.
1328	Do. ...	Ditto ...	Do. 158-161.
1329	Do. ...	Ditto ...	Do. 161-165.
1330	Do. ...	Ditto ...	Do. 166-169.
1331	Do. ...	Ditto ...	Do. 170-173.
1332	Do. ...	Ditto ...	Do. 174-177
1333	Do. ...	Ditto ...	Do. 177-181.

Serial No.	District.	Locality.	Subject.
1334	Patna ...	Nalanda Excavation.	Panels 181-185.
1335	Do. ...	Ditto ...	Do. 186-190.
1336	Do. ...	Ditto ...	North end of frieze on east side of temple showing position of panels 192-195, which are now displaced.
1337	Do. ...	Ditto ...	Panels 196-199 (196 and 197 displaced).
1338	Do. ...	Ditto ...	Do. 200-203.
1339	Do. ...	Ditto ...	Do. 203-207.
1340	Do. ...	Ditto ...	Do. 207-211.
1341	Do. ...	Ditto ...	North wall of monastery buried in Quad. 2 on plan in Cunningham's A. S. R., Vol. I.
1342	Do. ...	Ditto ...	Northernmost of the line of high mounds west of buried quadrangles.
1343	Do. ...	Ditto ...	Seated Buddha worshipped as Bhairava.
1344	Do. ...	Ditto ...	Sculptured slab known as Vajra-Varahi, in a field at Bargaon.
1345	Do. ...	Jagdispur ...	Sculptured plaque with seated Buddha and minor scenes.
	Photographs from the Central Provinces.		
462C	Chanda ...	Chanda ...	Jagannath temple.
463C	Do. ...	Do. ...	Joradeo temple.
464C	Do. ...	Do. ...	Ditto another view.
465C	Do. ...	Do. ...	Small temple near tank.
466C	Do. ...	Do. ..	Ditto another view.
467C	Do. ...	Do. ...	Panch deul.
468C	Do. ...	Bhandak ...	Balaji's temple.
469C	Do. ...	Ditto ...	Ditto from north-east.
470C	Do. ...	Ditto ...	Statue of Nrisimha in Balaji's temple.
471C	Do. ...	Ditto ...	Ruined temple.
472C	Do. ...	Ditto ...	Ditto another view.
473C	Mandla ...	Sahasradhara ...	Siva temple on a hillock.
474C	Do. ...	Ditto ...	Mahadeo temple, from north east.
475C	Do. ...	Ditto ...	Ditto from south-west.
476C	Do. ...	Ditto ...	Ditto inscription on step.
477C	Do. ...	Mandla ...	Temples in Deputy Commissioner's compound.
478C	Do. ...	Do. ...	Ditto, another view.
479C	Do. ...	Do. ...	Temples near Cutchery at Bhutahaghat.
480C	Do. ...	Do. ...	Ditto general view.
481C	Do. ...	Do. ...	Mandla Fort from the river.
482C	Do. ...	Do. ...	Ditto ditto.
483C	Do. ...	Do. ...	Ditto ditto another view.
484C	Do. ...	Do. ...	Rajrajeswari temple in the Fort.
485C	Do. ...	Do. ...	Vasnarain temple in the Fort.

Serial No.	District.	Locality.	Subject.
486C	Mandala ...	Mandala ...	Thakur-jika Mundir in the Fort.
487C	Do. ...	Do. ...	Small ruined temple near the above.
488C	Do. ...	Do. ...	Tower at Rajghat in the Fort.
489C	Do. ...	Do. ...	Mahal called Sat-khanda in the Fort.
490C	Do. ...	Do. ...	Ruined temple on the Nerbudda bank ins de the Fort.
491C	Do. ...	Do. ...	General view of Naik and Seth Ghats.
492C	Do. ...	Do. ...	Ditto Baba and Chain Ghats.
493C	Do. ...	Do. ...	Ditto Nanaghat.
494C	Do. ...	Ramnagar ...	Ramnagar Palace from south-east.
495C	Do. ...	Ditto ...	Ditto from north-west.
496C	Do. ...	Ditto ...	Ditto north-east wing, from courtyard.
497C	Do. ...	Ditto ...	Ditto, inscription slab on the wall.
498C	Do. ...	Ditto ...	Mahal of Raovakat.
499C	Do. ...	Changaon ...	Dal Badal.
500C	Do. ...	Ditto ...	Begum Mahal.
501C	Do. ...	Deogaon ...	Jamadagni temple.
502C	Do. ...	Ditto ...	Pataleswar temple.
503C	Do. ...	Khardeori ...	Siva temple.
504C	Do. ...	Ditto ...	Do., another view.

ANNUAL REPORT

OF THE

ARCHÆOLOGICAL SURVEY OF INDIA, EASTERN CIRCLE,

FOR

1915-16.

SUPERINTENDENT'S REPORT,

PART II.

PART II.

SIR RATAN TATA'S EXCAVATIONS AT PATALIPUTRA.

1. **In the Bulandi Bagh.**—In my report of last year I described (on page 49) how we had discovered toward the end of the season a singularly massive beam of wood lying at a slant from west to east some 150 feet north of the southern end of the Bagh in the main trench led north and south through the centre of the Bagh as a whole. I noted that we had also found a second similar slanting beam parallel to the former and to the north of it at a distance of some 9 or 10 feet, so that the total width of the whole slanting structure was as near as may be 14 feet 6 inches from (outer) edge to edge. Certain cross or tie beams, at curiously irregular intervals, were also found to have been laid north and south between these main timbers, much as the rungs of a mighty ladder or the steps of a giant staircase might have lain, save fo. the irregularity of the spaces in between, and for the fact that the flat side of some of these cross beams was not horizontal. The main timbers lay at a very steep angle in the soil, so that their eastern ends were higher than the western, which went down, so far as we could then determine, to at least 24 feet below the surface, whereas the tops were only 10 feet or so below the grass, and seemed to abut upon what then appeared to be some sort of floor composed of timbers set on end like piles and trending eastwards. The nature and significance of this structure were wholly obscure when the monsoon put an end to the season's work last year, but the great depth to which these timbers went down, as well as the number of early coins recovered in association with them, together with terracotta figurines of primitive style, showed us that considerable interest attached to it, and when the work could be resumed this season therefore our efforts were bent on widening the excavation at this point both east and west.

What had previously appeared to be a floor of sorts was then disclosed as in reality the outer wall of a curious wooden house, running eastward from the southern one of our two slanting timbers, and in line with it; while on the north a similar wooden wall ran east again parallel to the former and in line with the northern slanting timber, the slanting structure discovered in the preceding year's work thus constituting as it were the western side of this small house; but built not like the north and south walls vertically, but on a very decided slope. The timbers forming these outer walls on the north and south were very massive and carefully squared (they measured approximately two feet a side), and as we got deeper we found remnants of the planking that had been laid across them exteriorly and which was here preserved by the more constant saturation of the soil, whereas above every one of the planks had wholly disappeared. The fact that all our main timbers were also rotted off irregularly at their upper ends, but all at about the same level, would also seem to indicate that the preservation of the structure was in part dependent upon the degree of moisture in the soil, or rather to the continuity of the same. Where the beams went down deep enough to get into the area of permanent saturation, they were almost perfectly preserved, but up above, where they rose into levels saturated in the monsoon season and again dry in the hot weather, they gradually wore away by rot until they ceased altogether. It is thus no longer possible to determine with certainty the height to which the walls originally rose, nor even to say whether the whole was covered with a flat roof, or whether the slanting timbers on the west were continued right out to the eastern extreme of the building. But the fact that the uprights nearest to these slanting timbers seem themselves to rise gradually in the soil, so far, that is to say, as the nature of the soil has preserved them, would seem to indicate the probability that the western or slanting wall was really carried very much higher than now appears, but always in a slope. It is, however, most improbable that it did not terminate in either a flat (or sloping) roof at some point toward the east, for reasons which will appear later.

At a depth of about 22 feet below the grass we came upon what now remains of the flooring of this structure, composed of a series of squared

timbers laid north and south and at their ends fitted into sockets in the upright timbers of the walls, which timbers were found to go down in the soil for nearly 5 feet more, or to a total depth of nearly 27 feet. But certain features of this flooring are extraordinary, and raise problems to which at present no solution can be found. The upright timbers constituting the side walls north and south do not extend to any great distance to the east, say 15 to 16 feet from the upper end of the slanting, western wall, and yet the floor goes on. Indeed, one of the main works of the season has been to determine how far this floor does in reality go on, for since it was buried to a depth of 22 feet, a very considerable amount of digging was involved for every additional square yard of surface at the lower level which we cleared. In the area comprised within the walls these floor timbers, as I have said above, were trimmed at either end and then inserted in sockets in the uprights, but the extraordinary thing is that this same trimming of the ends is also observable in all the floor beams to the east, even beyond the limits of the walls. The deduction is obvious of course, that the walls themselves must originally have extended farther to the east, and indeed as far as these trimmed timbers of the floor extend. But when I state that we have now traced this flooring for nearly *three hundred and fifty feet* eastward, the mystery of the whole structure will become apparent. It is true that we were not able to clear this whole length this season. Our permission to dig covered only the area of the Bulandi Bagh itself, so that we cleared completely less than a hundred feet of flooring; but when it became evident that the floor was extending beyond the eastern limit of the Bagh, the Collector of Bankipore very kindly arranged permission for me to sink a series of trial pits through the fields which skirt the Bagh on the east, and these pits disclosed the same sort of timber flooring to about the distance mentioned. At this point my Overseer, Mr. B. L. Ghose, came upon a series of upright stakes or beams again, this time running north and south. But as the monsoon had already broken, it was not possible to follow these at all, and their relation to the whole remains as yet unknown. I should also add that in the pit still further to the east beyond this line of uprights Mr. Ghose still found the same blue or blue-black clay which has been found throughout this work to mean the presence of decaying wood, just as in the previous excavations at Kumrahar. From this it appears probable that when we can approach this tract, we shall again find still further wooden structures of some sort still further east. But of these of course we have no knowledge at the present time.

More than a little interest attaches to this dark blue clay. Our first experience of it was in connexion with the massive wooden foundation-piers skirting the south side of the throne-room at Site No. 1, Kumrahar, and then in the areas formerly occupied by the separate foundations laid underneath each separate column in the body of the Hall, as well as that filled first by the foundation flooring of the same. As stated in my Report at the time, Dr. Caldwell, Professor of Chemistry at Patna College, had determined for me that this discolouration was due to the decay of the wood itself, and was brought about by the loss of the oxygen originally contained in the soil, and which the decaying wood had used up in its process of combustion. When, however, I was asked to explain how it was, if this blue clay did clearly represent ancient and now perished wood, and there was originally a wooden floor underneath the plinth of the throne-room as a whole and deeper wooden foundations underneath each pillar, this floor and all these foundations had so completely decayed, whereas the wooden foundations on the southern edge were at least internally preserved to a remarkable degree, I found that even my scientific friends could give me no clear answer. The facts as facts seemed demonstrable, for scraps of wood were still preserved here and there underneath the Hall embedded in the blue clay, where all the rest of the former wood-work had disappeared. But the reason for this disappearance here while the wood-work on the south was still preserved was not so obvious as one might have wished. It then occurred to me that perhaps the explanation was connected with the *quantity* of the wood in question. That is to say, we could see that the flooring underneath the Hall had been, as flooring usually is, of no great thickness, and that similarly the

separate foundations laid for the separate columns had also been comparatively shallow, whereas the piers along the south were huge and massive structures containing a cubic mass many times as great as the masses in the other instances. We could also see that whereas in the case of the flooring and the separate foundations the blue discolouration was of very limited extent, the entire tract round and about the heavy piers was stained dark blue, and it therefore occurred to me that perhaps where the mass of wood was large enough, the decay of its exterior exhausted all the oxyegn in the neighbourhood, so that the remaining mass, forming the inner part or core of the wooden structure, could not have access to this element, and that its own decay was thereby retarded. In other words, oxygen is evidently essential to such decay, and where the enveloping earth for a great distance has been exhausted of this element, the remaining wood-work, for this chemical reason, tends to be preserved. My scientific friends admitted the logic of this argument, but were loth to commit themselves, as they very justly said that no instance of the sort appeared to be on record, and that in the absence of such data no definite pronouncement could be formed. It is therefore with some satisfaction that I record the fact that from what we can now see in the Bulandi Bagh this hypothesis appears to be confirmed. The total cubic mass of wood contained in the wooden structure under excavation was, as is obvious, considerable, and the partial decay of this great mass has completely changed the colour of the soil throughout the entire area, so that below a certain depth we have dug exclusively in blue-black soil. This means to say that throughout this tract there is little or no oxygen remaining in the earth, and I thus claim to have found confirmation of my previous hypothesis in the fact that our antiquities are most unusually preserved within this dark blue area. We have found even thin wooden sandals in good preservation, and such unexpected materials as scraps of basket work intact. Objects of this fragility would normally have disappeared *in to o*, and I can only account for their preservation here by the lack of oxygen in their environment joined to the constant saturation of the soil. Saturation, even where constant, will not suffice to preserve the perishable where it has access to the oxygen it needs for its decay, as is proved by the case of our smaller foundations at Kumrahar, which have altogether disappeared despite their being in the subsoil. On the other hand, in soil which is sometimes wet and sometimes dry, even the absence of the oxygen will not permanently preserve such fragile things as wood and bits of basketry. It is only where the normal supply of oxygen in the soil has been exhausted from a permanently flooded area that these perishable substances can be preserved indefinitely. But the fact that in the right conditions materials of this class can be preserved in India opens out quite a new vista of possibilities for the explorer here, since now the hope seems warranted that some day somewhere, in the ruins of some ancient wooden structure below the level of the sub-soil water, we may yet discover fragments of writing on parchment or a like material beyond all previous expectations. Sand, it appears, is not the only preservative of ancient perishable records. The Ganges alluvium, deprived of oxygen, will do as well.

The Provincial Report of this office is not the place to discuss at any length the numerous and interesting antiquities recovered in connexion with this work. I will, however, mention that in addition to the two or three single wooden sandals and the scraps of basket work referred to we recovered a number of knives in astonishing condition, a long sword, some metal arrow-heads, one or two metal hair ornaments of curious type, a few implements, a large and most valuable collection of early terracottas, over 200 coins, numerous pieces of primitive pottery, and a chariot wheel. The terracottas include large and exceptionally elaborate dolls or images of some female wearing an extraordinary costume with a sort of apron and with voluminous coiffure, and the turbanned head of an infant smiling which is one of the best pieces of ancient modelling that I have ever seen in India. As a work of art it is of quite unusual interest and value. We also have two or three smaller terracotta heads wearing a curious folded head-dress, folded square and draped round the cheeks, so as to give the whole so strikingly Egyptian an appearance that it has evoked immediate comment from almost

all who have seen them. We have also a gold signet ring, in splendid preservation which is adorned with a double headed makara device, and which Sir John Marshall assigns to Mauryan times. This is one of the few gold signets in existence from these early times, and is so perfect as to be quite wearable to-day. The pottery is also of considerable interest, since some of the earliest fragments are embossed with primitive symbols within an incuse, while the coins are remarkable as consisting in the main of those "early rectangular cast" coins which are so closely akin in some respects to the punchmarked coins which are admittedly the oldest in the country, and which, so far as I know, are not common anywhere in India except at old Rajgir, where they are popularly assigned to Jarasandha. But perhaps the chariot wheel is in some ways the most interesting of all. The rim has sprung at one point, and some of the spokes are out of place, but the iron rim around the hub is still in place, and the whole is easily reconstructed from what we have. So far as I know, this is the first time that any object of this type has been recovered in this country, and our recovering it was due apparently entirely to the lack of oxygen in the soil where it was found. But in addition to the finds selected here for mention I must also note certain fragments of a curious glass-like material which we have found. All our pieces are badly fractured, but they show a body of rather fine, light blue glass, to which some sort of coating of a dull, ochreous red has been applied externally. There is at present no means of determining the nature of the object from which these fragments come, nor have I ever seen anything like them hitherto. Still more remarkable, however, is a fragment of some round or cylindrical object, like a handle of some sort, which is composed of some translucent reddish-brown material coated externally with a jet black glossy substance around which a band occurs of bright yellow, with traces of some figured pattern in it. This also is something quite unique in my experience of Indian archæology, and I can in no way account for it at present. But that it is of choice rather than common quality is obvious, and it is much to be hoped that, further, more illuminating fragments of the same original may some time be recovered. At present I am reminded of nothing but the wonderful fusible pastes of ancient Egypt, on the one hand, and of the remarkable vesesels, jars, seats and other objects of apparently precious or semi-precious stones which are mentioned in the Mahabharata accounts of the Asura abodes. It may at least be safely asserted that they bespeak a developed art and an advanced civilization in high antiquity in Patna, but the problems connected with them must await further excavation, as also the other problems raised by this most interesting and also promising of sites. Among these problems are certain circular discolourations north of the wooden house itself, which at present seem to mark the downward passage of some further columns, or similar heavy objects, through the soft alluvium. But our observation of the stratigraphical appearances has not as yet advanced sufficiently to warrant any discussion of the matter at this time. They serve to show, however, the desirability, from an antiquarian point of view, of further work in the Bulandi Bagh.

2. **At Bara Pahari.**—Going east from the Kumrahar site for half a mile or so along the main road south of the railway, one comes to the very ancient well known as the Agam Kuan (or sometimes "Asoka's Hell"), where the road divides. Following the right hand turning south for another half mile approximately, one reaches the village of Chota Pahari, beyond which, at no great distance, is the next village known as Bara Pahari. The former of these two is marked by a widely spreading but low mound, the latter by a very large and very lofty one, and collectively these, and perhaps other still smaller villages, are known as Panch Pahari, or the Five Hills. Partly because of the situation and partly because of this name, it was here that Colonel Waddell thought to locate the five stupas which Hiuen Thsang tells us that Asoka built, and the identification I believe is generally accepted. I myself have never been able to make out five mounds in this vicinity, but the name itself is evidence that at some time there must have been five in the neighbourhood, and the identification seems well founded. Some years ago Mr. Mills, of Patna College, carried out certain excavations

here, in the mound called Chota Pahari, and either he or someone else dug rather extensively a little south of the summit of the larger mound as well, but in the published report of these works it appears that little of significance was found. Mr. Mills speaks of a confused lot of broken walls on the east of Chota Pahari, and certain brick-work in what he took to be the centre of the stupa there ; but he does not appear to have understood the walls he found, or to have made much out of them. As it appeared, however, from what Mr. Mills had found, that the mounds did indeed contain the remains of buried stupas, and as Colonel Waddell's reasons for identifying these monuments with the stupas of Asoka, seemed sufficient, it was clear that further excavation was desirable ; and since it was my wish this year to procure for Sir Ratan Tata sculptural and other artistic material if possible, the place seemed indicated as a natural centre for our work. The Collector of Patna was good enough to procure the requisite permission for me, and I began the work, late in December, on the east side of the larger mound, called Bara Pahari.

In outlining my plan of compaign my main endeavour was to avoid the mistakes of my predecessor and not to attack the main mass of the mound at first. I therefore drew off into the fields on the east, and led a bifurcating trench in towards the mound so as to approach the main supposed monument at divergent angles in the two arms of my trench, so that if there was anything like a rail surrounding it, I might have a larger chance of striking instead of merely passing it. But first of all, of course, I needed to determine something about the levels and the general stratification of the site, and to this end deepened the eastern end of my trench considerably. The big mound itself is surrounded on the east by cultivated fields, from which rise the two wide and fairly high terraces into which the east side of the slope has been dressed in modern times. Above these terraces towers the mound itself, which has been rather seriously encroached upon by houses on the north and west especially. The trench was started in the open field and led across the terraces, while subsequently the southern arm was extended up the slope so as to open out a portion of the mound itself. At first, however, our attention was centred on that portion of this trench which lay in the open field and across the lower of the terraces, and here it very soon became apparent that the stratification was peculiar. The ordinary soil of the potato field showed plentiful traces of early occupation, and below it we came at once to a shallow belt of *débris* which apparently extended far and wide but at a level only two or three feet below the surface. What was most puzzling was that beneath this *débris* we had what seemed like virgin soil, and that this belt of seeming virginity extended all along our trench and always at closely the same level, barely three feet below the level of the fields, even where we crossed the terraces. Pits sunk through this virgin clay disclosed but natural subsoil underneath it without a single indication of earlier occupation lower down, which seemingly implied that our oldest stratum here was only three feet deep at most. How great a surprise this was will be appreciated when it is remembered that in the Bulandi Bagh we had followed our wood-work downward in the previous year to something like 24 feet or more below the grass, and that at Site No. 1, Kumrahar, we had found the foundations of our throne-room to be about 16 feet below the surface, the wooden piers going down for 5 feet more at least. The surprise was increased when, as we drew into the region of the second terrace, we began to find irregular stretches of pavement, and then short stretches of walls on this same level, where the bricks were of a size which indicated great antiquity. We also recovered a few fragments of that polished Chunar sandstone which invariably means Mauryan work, so that it seemed necessary to assume that we were really on the Mauryan level despite its little depth below the surface, but at first it was not possible to understand how this could be.

The short stretches of wall already referred to occurred in the southern arm of our bifurcating trench, at the point where this arm was led across the second and higher of the two terraces on the eastern slope of the mound. They were for some time quite confused and baffling, and appeared to lie at all sorts of curious angles to each other. But while I was away in February,

on inspection duty in the Central Provinces, my draftsman, Babu Hari Das Dutta, uncovered what appeared to be a circular brick shaft of some kind, which proved on my return to be the hub-portion of the inner walling of a stupa, around which the other short walls were ranged as are the spokes in a wheel. I was familiar with this arrangement from my Frontier excavations, and at once saw that one of our goals at Panch Pahari had been reached. But although Hari Das Babu had uncovered the entire interior, so that an immediate search for the relic chamber was made possible, the centre of the monument was found to be quite empty, although it bore every seeming of being quite intact. We went down to a great depth beneath this stupa in the centre, but found only the seeming virgin clay described above. Incidentally, however, we found what seems to be the secret of this virgin clay, which, flaking off in horizontal bands on excavation, showed itself to be artificial; so that here at Panch Pahari, as in the case of the throne-room at Kumrahar, the Mauryan builders had apparently first erected a high plinth or stylobate on which to build their monuments, and had filled in the core of this foundation plinth with *kutcha* brick. This both explains the unexpectedly high level at which the Mauryan remains occur at Panch Pahari. and confirms my interpretation of the corresponding belt of would-be virgin soil at the throne-room site. We thus seem to have gained one clear fact added to our knowledge of Mauryan architecture at the capital, and to have found perhaps an understanding of what the Chinese pilgrim meant when he stated that even in his time the people in this region built principally on raised areas, owing to the swampy nature of the soil. Chandragupta seems to have had good reason for copying the artificial terrace at Persepolis, and for having retained the stylobatic form in his own palaces.

Now the first outward clue which I found to the existence of a stupa at this pahari site, before the wheel-like arrangement of the walls confirmed the theory, was the fact that at a certain point in the vertical side-wall of the trench I observed that the strata in the soil were running in opposite slopes, and that the central point where these slanting strata met was just above the circular brick shaft, which subsequently proved to be the hub of the stupa in reality. This was in that portion of the trench which crossed the second terrace. In the same side of the same trench, farther to the west, where it entered the main mound, and the side wall was consequently immensely high and sloped for safety to the workers, the same appearance was observed, of strata running away from each other and from a central point where a certain marked subsidence also was observable. I conclude, therefore, with some confidence, that here we have a second stupa, whose relic chamber has either subsided or has been rifled already. Now the former stupa was, as has been stated, underneath the terrace, that is to say towards the outer edge of the actual mound, on its eastern side. The second stupa is farther into the mound, somewhat to the south-west of the first. From this it appears that the great mound of Bara Pahari does not conceal one mighty stupa, as had been supposed, but that it buries rather a group of stupas. The position of the two which can be located suggests that possibly all five of the stupas which Asoka built are in this single mound. The size, etc., of the bricks, and the fragments of broken Mauryan stone work which we recovered seems to determine the element of date, and the relative position of the monuments in relation to the whole mound apparently bears out the thought. But very obviously no certainty can be attained on such a point until further, and indeed, extensive excavation can be made. Whether this excavation is desirable must needs be first considered.

So far as our operations went this year, it will be apparent to all excavators that we were prevailingly inside our stupas, and that consequently the paucity of small finds was not to be so much wondered at. Such material as lies there lies necessarily outside the stupas, and on the pavement round about them. At certain points, however, we did cross this area, and it is distinctly unfortunate that in these places we were not rewarded with more generous finds than met us. To approach the desiderated portion of the second stupa, or of the others which we may affirm do lie concealed within the mound, would involve enormous digging, owing to the great height of the mound as a whole, and the wide slope it would be needful to give to any trench

which essayed to reach the requisite depth. Our trench of course did not attain anything like the necessary depth to enable us to search for or examine the relic chamber of the second stupa, for it would have had to be widened very greatly before we could have gone down so far with safety, and my duties called me away before this could be done. But there seems no doubt but what important material does lie here, and it is certainly to be hoped that further digging can be undertaken here some time. It must be admitted, however, that further exploration here is likely to be costly, and it is open to debate whether a larger return for the same money might not be met with at some other site. Apart from the few pieces of Mauryan stone already mentioned, and a few coins, etc., the only thing of interest met with so far is a small and very early type of Tri-ratna symbol in what appears to be perhaps chalcedony, which was recovered deep down in the artificial filling of the plinth beneath the centre of the stupa. No other deposit seems to have existed in this particular monument; but it was clearly only one of the lesser stupas at the site, although even its diameter was over 80 feet, so far as we could tell with this year's work.

When operations are resumed here, I would suggest that possibly material might be found by continuing the trench outwards towards the fields until the edge of the artificial platform is determined. It is possible that this edge was decorated, and if this decoration took the form of long stone sculptured friezes, which is suggested by the nature of Mauryan architecture throughout India, it is quite within the bounds of possibility that substantial remnants of it might be found. This question could be settled by very simple digging and at no large expenditure, and this much further work at Bara Pahari seems imperative. But unfortunately it did not prove possible for me to undertake this exploration this year, as I was compelled to transfer my only available staff to Nalanda to insure the beginning of the Royal Asiatic Society's work at this new site this season. I shall hope to examine the eastern edge of the main terrace or artificial platform at the earliest opportunity. For if such material as I mention could be found, it would obviously repay any possible expenditure which might be incurred. I am less sure whether the complete excavation of the whole big mound would pay.

THE ROYAL ASIATIC SOCIETY'S EXCAVATIONS AT NALANDA.

On page 7 of this Report I have already mentioned the pleasure afforded to the Archæological Survey of India by the decision of the Council of the Royal Asiatic Society of Great Britain and Ireland to entrust this department with the funds collected some time ago in the Society's Exploration Fund, and my own satisfaction in particular that, since the money in question was earmarked by the Society for application to the buried site of Nalanda in the Patna district the privilege of utilizing it has come to me. Nalanda, as is widely known, was one of the principal seats and centres of Buddhist culture and Buddhist learning in the Gupta period of Indian history, and for some centuries thereafter. The precise date of its foundation as a "university" is now unknown, but from the circumstance that the Chinese pilgrim Fa Hien makes no particular mention of the place, whereas the pilgrim who followed him, Hiuen Thsang, describes the place at length, leads modern scholars to infer that it must have risen in the interval between the visits of these two, namely, somewhere about the middle, perhaps, of the fifth century A. D. It is, however, probable that only the distinctive greatness of the place is of so late a date. Presumably the importance of the site reaches back to ages more remote and indeed it is reputed to have been the birthplace, it or its immediate neighbourhood, of two of the Buddha's great disciples. It lies only some seven miles north of Rajgir, which was the capital of India in the days of Babylon, and it would therefore be remarkable if it had had no interest of its own before the fifth century of our era. But what gives the place its modern fame is undoubtedly the so-called university which so aroused the enthusiasm of Hiuen Thsang, and of which Mr. Broadley in his digging years ago, recovered such important remnants. Of this region as a whole General Cunningham declared that it produced what in his judgment were the finest sculptures in all India, and it is

certainly a fact that a considerable portion of the finest sculptures in the Calcutta Museum originated from this very site. Much of Mr. Broadley's material was brought together in a Bihar Museum subsequently broken up, and these sculptures were then transferred to Calcutta, where they constitute a cherished possession to this day. The newly-created Province, anxious now to have a museum of its own, has naturally cast longing eyes upon these treasures, and in the impossibility of recovering them had long been contemplating further work at this most promising of sites, but for lack of funds and other reasons has postponed the work. The Royal Asiatic Society's offer was therefore peculiarly welcome to all concerned, the more so since they very generously offered to present the Province with whatever might be found, and the Local Government was good enough, despite the War, to provide funds for the necessary acquisition of the land. A certain delay of course was involved in these proceedings, and I was not able to begin actual work until the end of March; but the delay would have been greater still, and it would have proved impossible to commence at all this year, if it had not been for the energy as well as tact of the Special Land Acquisition Deputy Magistrate, Rai Sahib Bhuban Mohan Chatterji, who is entitled to the appreciative thanks not only of this Department, but of all concerned. On 11th July 1916, formal possession was made over to me of a tract of 41·48 acres, comprising almost exclusively the mounds and adjoining wastes which mark the site, but permission to excavate was procured for me in March, as I have said.

As the present is only a brief preliminary statement of the progress made, I do not propose at this time to enter into any discussion of the digging previously carried out. It was fortunately confined to a few restricted areas, and as the site is very large indeed, the damage is less considerable than might be feared. The tract as a whole presents a most wonderful appearance even now, with its long line of lofty mounds extending north and south for some 3,000 feet, and its maze of quadrangles upon the east, all now completely buried, but yet clearly outlined and at quite a height above the fields. Detached mounds farther afield both east and north add to the fascination and, may I say, temptation of the site, and individual sculptures scattered here and there, as well as broken fragments perched on mounds, define the promise which the whole affords, and as an *ensemble* give the archæologist as great a thrill as he could well desire.

In my final account of these operations in the Director-General's Annual, it may prove possible to publish a detailed plan of the site as a whole. This plan, however, is not ready yet, and to render this first report intelligible, I must, I fear, invite a reference to the site plan published by Cunningham in Vol. I of his A. S. R., page 28.

Partly because the previous excavations at this site had centred largely in the chain of lofty mounds numbered A to H by Cunningham, whereas the complex of quadrangles seemed more intact, and partly since in view of the advanced date at which my work commenced it appeared desirable to start where the least digging would be requisite, I decided to begin the season's work in some portion of the latter complex; and since Hiuen Thsang leads us to suppose that the quadrangle marked the No. 1 on Cunningham's plan was the oldest of them all, and that the extension was gradual and towards the north prevailingly, I chose the south-east corner of Cunningham's Quadrangle No. 2 as my starting point, and led a trench thence north-west across both this quadrangle and the next, No. 1 on plan. Now although the configuration of both these quadrangles was clearly marked, they were as I have said completely buried, and constituted in reality adjoining mounds or rather almost one continuous mound, which rose considerably above the fields. At the extreme south-east of this raised area I was puzzled to observe, before the digging started, that some sort of pavement was in evidence not far below the highest level of the mound, and outside what seemed to be the line of walling. As the work proceeded and the trench was deepened, we found ourselves brought to a halt just beneath the surface by other stretches of similar pavement in several places, and these areas were abandoned then until we could get further light upon them. Soon, however, the main north wall of the

southern monastery came to light together with a cross-wall of one of the cells at the north-west corner of the quadrangle which Cunningham calls No. 1.

For a time excavation was continued at both these places; but as the extent of the digging required for clearing the structures became apparent, attention was by degrees focussed upon the northern edge of the north wall of the southern monastery. (No. 2 on the plan), and the work to the north-west was postponed for this season. We succeeded, however, in uncovering the whole north-west corner of the northern monastery (No. 1), and in determining that it was at least a two-storeyed structure, with portions of the second storey still intact if this latter is not a later structure covering an older one. A few sculptural fragments were also recovered within the few cells cleared, including one of the most perfect seated Buddhas, with two attendants, that I have ever seen. The sculpture is a small plaque, of the almost blackish stone generally used for sculptures in this region, but the delicacy of the carving, particularly as regards the features, is remarkable, and the exceptionally perfect preservation of the whole. The top part of the plaque is missing, to be sure; but no injury has occurred to either the central Buddha or his delicately modelled companions. The fragment, even in its present state, is quite a little gem. And since we have so far cleared merely the barest beginnings of one corner of the upper storey of this extensive monastery, it will be evident to all how reasonable a hope we have of finding further rich material within this mound.

As for the southern monastery, No. 2, on which our work was centred for some time, the north wall was found to extend east and west for a total length of 203 feet, at these points joining the side walls, which we now see measure 168 feet each. The quadrangle, therefore, is not a perfect square. The northern main wall is 6 feet and 6 inches in thickness, the west wall, 1 foot thicker still, and both are composed of most superior bricks, of a light yellowish tint, and admirable texture, fitted together so perfectly that in some places the joints between the bricks are altogether inconspicuous. As brick-work, the construction is remarkable, far superior to any modern work that I have seen in recent years. It appears, however, to have been concealed originally, even so; for bits which are still preserved here and there suggest that the whole was plastered over, and then presumably decorated in some way.

So far as at present appears, the west wall was the front of the monastery. For a length of 50 feet 6 inches it runs south at right angles to the main wall on the north, and then shows a westward projection extending 21 feet, where it turns south again for 19 feet 6 inches till it meets a very grand staircase running west again to a distance of 38 feet in all. The width of this main staircase is 32 feet, and it leads by very gentle risers to what I should at present suppose must have been the second storey of the monastery, which may have been its main floor after all. The area just at the top of this great flight of steps is not yet cleared sufficiently for any detailed study of the arrangement to be made, but the rectangle formed by the main walls was evidently lined with the usual cells on all four sides. Those in the centre of the north side measure 9 feet 6 inches in width, the ones just west of these, 10 feet, those in the north half of the western side, 11 feet and those nearest to the staircase 12 feet each. In front of these cells there seems to have been a walk 10 feet 6 inches wide, which may or may not have been covered by a colonnade, and which is bounded on the court side by what now seems like a low parapet wall, underneath which is another solid brick wall going down to quite a depth. The fact that externally we found the west wall of the façade to go down 24 feet 7 inches, or rather to have this extraordinary height of masonry still standing, (all wholly buried before our work began), would seem to indicate that we are dealing with a two-storeyed structure, as I have said before. But it must be admitted that between the low wall I have likened to a parapet, inside the quadrangle, and the solid wall which goes down to such a depth beneath it, there seems to be a stratum of loose earth and *débris* which could best be accounted for if we had two structures of divergent age, the higher erected over the ruins of an older one. Until further excavations can be carried out no certainty of interpretation can be reached. At present the evidences are in this regard conflicting, the outside

looking like a single, very lofty structure in two storeys, the inside more like two different monasteries, one on the other. Next year, presumably, our doubts upon this point will be removed.

Save at the angle formed by the main wall on the west side and the first projection we have nowhere cleared the full height of the main wall externally, but in the partial clearance so far effected, we have uncovered one ornamental moulding, and have recovered a few sculptural fragments. These include a small standing Buddha and four seated Buddhas in a more or less broken condition, and other fragments ; but none of these finds are of special interest, and all seem late. It is to be hoped that when we can get to the base of the outer walls externally, and can go also to deeper depths inside the quadrangle, our sculptural fragments will multiply. As yet we are rather too near the surface in most places to expect finds of this nature to be plentiful.

It is, however, even now apparent that the excavation of this monastery will possess a very special interest, and that when it is finally completely cleared, India will have regained an ancient monument of real importance. So much of the outer walls is now preserved that when uncovered the whole will form a very striking ruin, whether it prove to be a single structure or two monasteries. If the latter is the case, as I am now inclined to think, the interest of the site will be enhanced still more. At all events the trial excavations carried out this year suffice to show how generously expenditure upon this site will be repaid.

But this was not the only work attempted. While these excavations were going on, a peasant brought my assistant, Babu Hari Das, an inscribed clay "seal" of promise, which he said had been found somewhere in the neighbourhood. On Hari Das making further enquiries, it transpired that this seal had been found by a small boy, who pointed out this spot, just east of the quadrangle which Cunningham has numbered 4. Hari Das very astutely despatched some *khurpi-wallas* to this place, and these after a few hours of only shallow digging, returned with several basket-fulls of fragments. The work was then taken in hand in earnest, with the result that a total of 603 seals or tablets were recovered in an unbroken state. These are of various sizes, ranging from very tiny buttons to fairly substantial plaques, but all bear apparently the Buddhist creed in close writing of a mediæval date and differ principally in size and decoration, as some show miniature stupas and the like, while some are plain.

Just west of the spot where this great haul of seals was made there was a mound, upon the eastern edge of which the villagers at some time not long past had done a certain amount of excavation on their own, until someone had stopped them. In the course of this work they had uncovered what seemed to be the inside of some massive wall of stone, evidently a projection on some building. I accordingly put a few men to work at this place also, and before the season closed succeeded in setting free on all four sides a large stone temple of some sort, with interesting mouldings. There is a short flight of steps in the centre of a projection on the east side, toward which the temple faced, and the central portion of each of the other three sides is also advanced, but to a very slight extent, designed, possibly, to diversify the wall by added play of light and shade. The outside only has been cleared so far, but from what we can now see it would appear as though the interior were a solid mass or core of brick, from which one would infer that what we have is only the solid plinth of the temple, whose superstructure has entirely disappeared. The point, however, is not settled yet. What is determined, and what lends peculiar interest and value to the whole, is the fact that above the moulding of this plinth exteriorly occurs a band of sculptured panels, in stone, which band extends around all four sides of the shrine. They are symmetrically placed, twenty panels occurring on each side of the main entrance, and nineteen in each of the three divisions of the walls on the other sides, the panels in all cases being mutually separated by most ornate pilasters, of pot-and-foliage type, many of which are exquisitely carved, and all in stone. There are thus all in all 211 sculptured panels, and as no two are alike, and all are of great interest, the importance of the find can be imagined. But it is to be feared that a few of these panels have got out of place, and that in consequence the toll will not be quiet complete.

Now each of these stone panels is, as it were, framed in a decorated frame in high relief, the shape of which is rectangular (the greater axis running horizontally), but the upper side of which rises into an arch. This gives to the arch itself very much the appearance of a trefoil, and since several instances occur where the arch is definitely pointed, as are the little arches in the wall at Zainul-Abidin's mother's tomb in Srinagar, the present discovery confirms Sir John Marshall's contention that this form in Indian architecture is not due to Moslem influence, but long antedates the Moslems. In Srinagar the arches in question are older than Zainul-Abidin, while in this Nalanda monument Sir John accepts my suggested dating in the sixth or seventh century A. D. The pointed form of arch is therefore pre-Muhammadan in origin, but these are, of course, no true arches in a structural sense.

But although from the clearly Gupta character of the sculptures the panels may safely be ascribed to the period I have named, at least provisionally, I am not as yet altogether sure in my own mind as to the dating of the building. There are two projecting cornices above the panels, picked out at intervals with minor horseshoe arches variously decorated, and interspersed with sculptured birds in a variety of poses, but most ornate in character; and in some places it seems as though there had been a third cornice as well, with larger and even more decorative arches, framing human heads in certain instances. But these various cornices do not extend around all four sides of the structure. In some cases this is due merely to the fact that some portion of the wall has gone, and there is thus a mere gap in the cornice, which was once continuous. In other cases, however, we have the brick-work of the wall rising to quite a height, at least above where the cornice ought to be, and yet no cornice is now traceable. In other places we can see that the component parts of the cornice are now out of position, pieces having been fitted in where they do not apparently belong, and certain of the panels appear broken and filled in with unsculptured slabs. Other panels are clearly in an unfinished state, and several of the pilasters are also merely unsculptured blocks inserted. Here the obvious deduction is that all these slabs and panels were intended to be sculptured in position, and that for some reason the work was never finished. I am not yet able to see, though, how this explanation can apply to those parts of the cornice where already sculptured stones are out of place. Here a more reasonable explanation to my mind would be, that we are dealing with a fairly late (and perhaps unfinished) building, in which older material was being utilized. That the sculptured panels are prevailingly if not exclusively of the same date seems certain, and the exquisite quality of the carving shows that that date must have been not far distant from Imperial Gupta times. But I myself am not as yet prepared to assign the temple proper to such early times. Doubtless the matter will be clearer as the work goes on, but the fact that after following down the outer side of this plinth and uncovering various projections we came to some foundation stones on which it rests, and still lower down came upon what seemed a brick pavement which extended a few feet east to an edge which then went down some 8 feet more without disclosing any lower terminus, leads me to suspect that here again, as at Quadrangle No. 2, we may be dealing on the surface with a structure fairly late, which had been superposed upon the ruins of some older building. At present, as will be clear from what has been said, the whole has a distinctly terraced look about it, and Cunningham, I believe, found that the temples at Nalanda were built in terraces. But there is no sign of any continuity in the steps upon the east, nor do I see how we could account for the buried foundation stones of the upper terrace and a pavement nearly two feet beneath these foundations if we were dealing with only one homogeneous structure of uniform age. However, it is useless to speculate upon what can easily be determined by further excavation. I mention these matters merely to emphasize the fact that various interesting problems are connected with this site. Their solution is impossible as yet.

So, too, is any detailed discussion of the sculptured panelling. Elaborate photographic plates will be needed to make these intelligible, and a Provincial Report is not the place for such extensive illustrations as we need. I will only add, therefore, that some of the panels are clearly narrative (Mr.

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Hargreaves has already recognized a very clever representation of the Kacchapa Jataka in one, where the story of the tortoise is most quaintly drawn), while others seem to show separate divinities. Many are occupied with merely decorative devices, some of which are of extreme beauty and fascination. One shows a design based upon the hexagon, which Sir John Marshall tells me was supposed, like the pointed arch, to be exclusively of Moslem inspiration in this country; while others show a great variety of intricate and altogether charming geometrical designs. Perhaps the strangest though, are those panels which represent apparently folding doors or gates where one wing of the gate is shown to be closed, while the other half is rendered open by the simple device of not sculpturing it at all, but letting one-half of the figure within appear to view. One panel is entirely taken up with the heraldic mask so popular in Gupta art and in the art of later times, down to the coming of the Moslems. Another shows a human-headed bird with very flowery tail, the whole having a curiously Burmese look about it. One shows a makara with very ornate flowery tail; another a seated Kinnara apparently playing on a flute; one is given up to a device of eglantines, and several show very fancy birds much like the Phœnix or Hō-ō in the art of China and Japan. A very heraldic, pheasant sort of bird is strutting like any jackdaw of Rheims in another, swinging triumphantly an inverted Vajra in his beak, while elsewhere a most uncomfortable lion is towering above some smaller beast which has a curiously porcine look. A few panels seem to be of an erotic character, others seem representative of deities. But from even these remarks it will be evident that protracted study will be requisite before the collection can be published in detail. From many points of view the series is of fascinating interest, and it may reasonably be anticipated that their careful study will be apt to shed no little light upon the history of art and of design in early mediæval times in India.

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